LEADERSHIP SUMMIT ON DIVERSITY IN DOCTORAL EDUCATION

Proceedings of a Conference
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ACKNOWLEDGMENTS

The Office of Postsecondary Education at the U.S. Department of Education is grateful to all who helped make the Leadership Summit on Diversity in Doctoral Education a success. By participating in planning discussions and collaborating to produce this report, you have helped increase awareness of today's most challenging topic in American higher education: diversity.

We particularly acknowledge the extraordinary efforts of those who created and planned the conference, convened the attendees and published the proceedings for future reference. We appreciate and thank you for your efforts.

Creating and Organizing

The leaders who developed the conference were: Richard W. Riley, secretary, U.S. Department of Education; David Longanecker, assistant secretary for Postsecondary Education, U.S. Department of Education; Claudio Prieto, deputy assistant secretary, Office of Higher Education Programs, U.S. Department of Education; H. Patrick Swygert, president, Howard University; Jules LaPidus, president, Council of Graduate Schools; Orlando L. Taylor, dean, Graduate School, Howard University; Audrey Hutchinson, chief of staff, Postsecondary Education, U.S. Department of Education; Catherine LeBlanc, executive director, White House Initiative on Historically Black Colleges and Universities, U.S. Department of Education; and Cosette Ryan, graduate programs team leader, International Education and Graduate Programs, Higher Education Programs, U.S. Department of Education.

Convening the Crowd

Together these people attracted attendees: Frances D. Horowitz, president, The Graduate School and University Center, The City University of New York; William Kirwan, president, The Ohio State University; H. Patrick Swygert, president, Howard University; and Steadman Upham, president, Claremont Graduate University.

Publishing the Proceedings

This publication was produced by Orlando L. Taylor and Cosette Ryan (also listed as organizers), with the editorial assistance of Gwendolyn S. Bethea, director, Communication and Public Relations, Howard University Graduate School, and the technical assistance of Craig Pooler, program analyst, International Education and Graduate Programs, U.S. Department of Education.

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FOREWORD

Orlando L. Taylor
Dean, Howard University Graduate School

The topic of inclusiveness in graduate education, especially at the doctoral level, has stimulated intense interest in recent years. The current national discussions on race, gender and affirmative action have contributed to this heightened attention.

Inclusiveness in doctoral education is especially important because recipients of doctoral degrees generally become faculty members of our colleges and universities, contributors to the nation's scientific community, and leaders in the academic disciplines.

Prior to the second half of the 20th century, inclusiveness in doctoral education was more fantasy than reality. Few people of color received doctoral degrees, and African Americans were unwelcome on many university campuses. In the southern states, African Americans were denied admission to graduate school until the 1950s and 1960s, due to segregation and Jim Crow laws.

Between the middle 1960s and the late 1970s, many developments significantly increased the number of minority students in doctoral programs. For example, the Department of Education established the Patricia Roberts Harris Program and the Graduate and Professional Opportunity Program (GPOP) to provide federal funding to minority students seeking graduate degrees. Private foundations and industry established similar programs. In addition, most of the nation's graduate schools established minority-targeted recruitment and fellowship programs, along with institutional infrastructures to support these efforts.

While the number of underrepresented groups earning doctoral degrees has waxed and waned in the last three decades, overall progress has been achieved but not nearly enough. For example, although minority groups earned Ph.D.s at record levels in 1998, the percentage of Ph.D.s awarded to these groups remained disturbingly low.

Of the 42,683 people who received their Ph.D.s in 1998, members of minority groups received only 4,014, or 9.4 percent, of these degrees — even though these groups make up more than 30 percent of the U.S. population. If Asian Americans are removed from these numbers (because their numbers are comparable to their presence in the U.S. population), the number of Ph.D. recipients in minority groups drops to 2,718 (6.4 percent). The numbers are even lower in such fields as the physical sciences, the biological sciences, mathematics, and engineering.

Recent challenges to affirmative action threaten the continuation of even the most modest gains for minority groups. Such judicial rulings as *Hopwood v. Texas* and such statewide referendums as Proposition 209 in California and Initiative 200 in Washington have had a chilling effect on programs designed to enhance diversity in doctoral education. In addition, many institutions and some states have become tentative in initiating and maintaining such programs in the current political climate.

Although definitive data are not yet available for all disciplines, a recent report by Shirley Malcolm and her colleagues at the American Association for the Advancement of Science suggests that we are "losing ground" in our enrollment of African Americans and Hispanics in doctoral programs in science, mathematics and engineering. [1]

If one takes the view that inclusion in doctoral education is in the national interest, then successful and legally unobjectionable strategies must be identified and implemented that enhance the recruitment, enrollment, retention *and graduation* of these underrepresented groups.

[1] Shirley Malcom et al., *Losing Ground*. (Washington, D.C. American Association for the Advancement of Science, 1998).

In June 1999, approximately 50 university presidents and graduate deans from a cross section of the nation's doctoral–granting institutions met with leaders from the U.S. Department of Education and other segments of the federal government to discuss strategies to address this topic, such as how the higher education community could set valid benchmarks to monitor progress in doctoral education.

This monograph presents the proceedings from the conference along with the participants' major recommendations to enhance diversity in doctoral education.

In higher education, enhancing equity by awarding the most advanced and respected degree to a diverse group of people is a worthy and necessary goal. By achieving such equity in education, the nation will benefit by developing human potential to its fullest.

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INTRODUCTION

ISSUES IN AMERICAN GRADUATE EDUCATION: ACCESS, TEACHING AND DOLLARS

Claudio R. Prieto
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In November 1998, the U.S. Department of Education convened a leadership conference of graduate school presidents and deans, to assess and discuss major diversity-related issues of graduate education and to suggest strategies to address them. The Department's Assistant Secretary David Longanecker, hosted the conference which focused on its theme "Lessons from the Field on Diversity: Ensuring Access, Retention and Success at the Graduate Level." In February 1999, the Department released a report of the proceedings, by the same name.

The February report identified *access* by underrepresented groups as the major issue facing graduate education in the nation's colleges and universities. The report highlighted the need for a national dialogue on the barriers that affect minorities and other underrepresented groups, and the actions leaders in the higher education community and the Department of Education might take to address this need.

In June 1999, the Department held a second leadership conference, hosted by Secretary of Education Richard Riley and Howard University President H. Patrick Swygert and attended by representatives of higher education institutions and the Department of Education. The conference was a follow-up to the report from the first conference. During this meeting, an agenda was developed to seek tangible answers to the question: How could the higher education community and the Department of Education address the issue of access? In addition to obvious problems with diversity and access in graduate schools, conference attendees acknowledged that the problem is partly rooted in K-12 as

well as in undergraduate school. The shortcomings at these levels are addressed specifically by federal policies aimed at overcoming barriers and keeping the "pipeline" of student flow as open as possible.

Attendees recognized that this concept does not stop at the doors of graduate education and that it should extend to education beyond the bachelor's degree—especially to doctoral education.

In addition to access, the conference group identified the following two other major issues:

- Substantial increases are needed in all sources of financial assistance for doctoral studies, considering that many minority students are adults with competing financial obligations.

- Substantial numbers of faculty members are needed at institutions serving underrepresented populations to obtain doctoral degrees to improve their quality of instruction and to better prepare and motivate pre-graduate students for the more competitive environment of graduate school.

These interrelated issues must be addressed in concert to generate any measurable improvements in the dismal lack of real opportunity and the consequent underrepresentation of certain groups in doctoral education programs.

Recommendations provided at the conferences highlighted the need for improved counseling for minority students—indeed, *all* students—to bolster engagement in challenging courses and programs that both stimulate and prepare students better for post-baccalaureate studies. Students must be encouraged to pursue Ph.D. studies instead of settling for a master's degree, which often limits career opportunities and stifles professional development. As a committed advocate remarked, tongue in proverbial

cheek, “If a doctorate leads to unemployment, we want to share this particular pain with our white Anglo brethren…”

As stated earlier, the lack of sufficient financial assistance to support full-time studies and dissertation research was identified as a key factor in keeping many talented students of all groups from making the substantial commitment to obtain doctoral degrees. A few recommended ways to address this problem include consortial pooling of institutional resources; increased federal support for programs like Ronald E. McNair and Graduate Assistance in Areas of National Need (GAANN); and financial counseling for graduate candidates.

According to the National Center for Education Statistics, minority students are dramatically underrepresented among degree recipients at higher education levels, despite an increase in minorities earning degrees. For example, in 1994 the percentages of underrepresented groups that earned master’s degrees were 6.1 percent for African Americans, 3.3 percent for Hispanics, 4.2 percent for Asians or Pacific Islanders, and 0.4 percent for American Indian/Alaska Natives. Even more disheartening are the following percentages of these groups at the doctoral level: 3.8 percent for African Americans, 2.2 percent for Hispanic Americans, 6.1 percent for Asians or Pacific Islanders and 0.3 percent for American Indian/Alaska Natives. This is distressing when our nation is 13 percent African American and 10 percent Hispanics, based on 1995 U.S. Census Bureau data.

Conference participants reviewed the information and found that graduate schools across the nation are beginning to recognize the need for urgent action on this issue. Attendees made several recommendations to the Department of Education about how to promote graduate education among minorities, including the following:

- The federal government should do more to provide financial and supportive services to minority students pursuing graduate degrees.

- The Department of Education should call for a White House conference on diversity in graduate education as a way of raising the level of national awareness and government commitment.

- The Department of Education should establish ongoing mechanisms for its staff to communicate regularly with members of the graduate community on issues concerning access to and success in education for underrepresented minorities by establishing policies for existing graduate education programs.

- The Department of Education should prioritize research and training grant proposals, especially proposals that seem to link, as appropriate, undergraduate and K-12 programs that target low-income, first-generation and minority students. These proposals include Graduate Assistance in Areas of National Need (GAANN), the Ronald E. McNair Postbaccalaureate Achievement Programs, and other TRIO programs. Linkages across departmental programs are necessary for inclusion in graduate education.

- We should all begin planning jointly for the reauthorization of the Higher Education Act (HEA) in 2003. If past experience holds, it is not too early to develop proposals, consensus and communications to use the HEA as a vehicle to advance the national agenda on graduate education.

As affirmed in the leadership conferences, graduate and professional schools are critical to the economic success of this nation. These schools are essential to increasing the participation of minority groups in our society—thereby preparing the next generation of leaders. The Department strives to support all people, including minorities, in graduate education. Following the recommendations from the summit, the Department plans to renew its commitment to graduate education and work to reverse the waning diversity in doctoral programs.

THE CONTEXT

Richard W. Riley
Secretary, U.S. Department of Education

First, I want to thank David A. Longanecker for his long service to the U.S. Department of Education. I also want to acknowledge the leadership of Howard University and Howard President (H. Patrick) Swygert for co-hosting this conference.

It is a pleasure to be here to help open this summit on diversity in doctoral education. I think it is especially appropriate that we are at Howard, which just celebrated its 40th anniversary in granting doctoral degrees and awards more Ph.D.s to African Americans than any other university nationwide.

I am so pleased that we are successfully building on the original meeting we had in November. I hope this will be the first in a continuing series of conversations that will serve as the source of new ideas in this important area.

We have come a long way in terms of increasing diversity in graduate education. Over the past decades, for instance, the number and representation of African American doctoral degree recipients has increased from 1,057 to 1,636, or by 54 percent. The number of Hispanic degree recipients has increased from 751 to 999, or by 33 percent, and the number of Native American degree recipients has increased from 95 to 158, or by 66 percent.

These are noteworthy developments, and David Longanecker will explore these and other numbers with you in greater depth later during the conference. It is equally important, however, to acknowledge that even as the percentages of these minority students have gone up significantly, the overall numbers are still too low. The percentage increase is built on a very small base number.

Furthermore, we must increase and broaden the participation level of minority students, so that fields such as the physical and life sciences are not neglected. In short, we still have a long way to go.

A few weeks ago, I gave a major speech to mark the 45th anniversary of the landmark Supreme Court decision, *Brown vs. Board of Education.* The central theme of that speech was that, while *Brown* guaranteed every child an equal right to a public education, we now must work together to guarantee the principle that equal educational opportunity means an equal opportunity for a *quality* education, with emphasis on the word *quality*. Indeed, it is time to ensure that a quality education is a key civil right for the 2lst century.

If there are two overriding principles that define what we hope to accomplish, they are to end the tyranny of low expectations and to raise the achievement levels for all our young people.

To do this means providing comparable learning resources to all students and holding all students and schools—from preschool on—accountable to the kinds of high expectations that are necessary for learning to high standards.

I think it is important to reiterate this point tonight. It is only by strengthening the quality of our elementary and secondary education that we can hope to ensure that there is a sizeable and diverse group of students who are both eager to and able to take on the challenge of postsecondary and postgraduate study.

By focusing on the quality of education throughout a student's life, and by building both students' and society's appreciation for continuing an education to the next level, we can expand the number of minority graduate students who achieve the level of Ph.D.

If we fail in this comprehensive effort, we shall continue to see large numbers of minority students being distracted from the scholarship track and entering into business or other

careers before they have come near the goal of the Ph.D.

I'm sure most of you saw the lead story in the *New York Times* last week about how the booming job market has led to significant increases in opportunity for African Americans. It is hard to fault someone for taking a job that has positive short-term economic consequences.

What we must do is lower the opportunity costs of getting a Ph.D. so that the long-term goals of staying in these programs are at least equal to the short-term benefits of leaving them.

The final point I'd like to make is that the diversity of a student body has a significant impact on the quality of learning and the ultimate professional success of a student, as well as a broader impact on our nation as a whole.

More and more social scientists are confirming, and more and more Americans are realizing, that a school's diversity is an important means of enhancing opportunities for—and increasing—high standards of learning.

As Harvard University President Neil Rudenstine has written: "Diversity is ... the substance from which much human learning, understanding and wisdom derive. It offers one of the most powerful ways of creating the intellectual energy and robustness that lead to greater knowledge."

But equally important is the pragmatic conclusion that we can draw from this statement. If tomorrow's college graduates are going to work with people in a broad range of racial and ethnic groups or teach in diverse communities, then today's college students must be able to study, talk with and learn from students and faculty of different backgrounds, nationalities, races and religions.

Just as you can't learn chemistry in college without observing and participating in

chemistry experiments, you can't learn about life in America if you don't have the opportunity to discuss, study and live with people of different races and backgrounds.

What this means for our nation's institutions of higher education at both the undergraduate and graduate levels is that they need to develop new and creative ways to enlarge the pool of eligible minority applicants.

The determination of who is "qualified" for college admission can and should be based on more than the traditional factors that are used in deciding to offer admission to an individual student.

Similarly, at the graduate level, we must make extra efforts to encourage and nurture less traditional students, particularly minority students in non-traditional fields.

It will require colleges and universities reaching out to students who otherwise might be shortchanged. The most important efforts are those that develop personal connections; that work to strengthen mentoring, tutoring and counseling by volunteers from civic and religious organizations; and that link universities with local schools.

Across the country, too many young people, particularly low-income and minority youth, never make it to the next level of education. The reason is *not* because they are uninterested in pursuing a quality education. It is *not* because they are not up to the task or do not have strong minds.

Many minorities fall by the wayside because of predetermined low expectations of them as children. Thus, they are not given the encouragement and critical information they need early to pave the road to a quality education that includes college.

Too many students from low-income schools are not told which courses are the right ones to take to prepare for a life of academic achievement and professional success. Too many are not told how to meet the costs of college through financial aid. And too many do not

accept the fact that learning is a sign of strength, not weakness. Let me tell you, this is the kind of information and support that makes a difference.

We are not doing any of our students, faculty, institutions of higher education or our nation any favors if we fail to encourage, welcome and support minority students in graduate programs—or fail to give them the preparation they need to succeed in the rigors of doctoral studies.

It is an achievable goal. But to do so, we must have high expectations of all students. And we must teach all students to high standards—from the very beginning.

I am pleased that President Clinton and Vice President Gore have developed, with the leadership of Congressman Chaka Fattah, an initiative that supports these kinds of activities. The GEAR UP Partnership links colleges with middle schools and high schools to help the younger students make the critical decisions they need to make to prepare for college.

GEAR UP builds upon, complements and enhances the positive effects of the TRIO program. While TRIO focuses on individual disadvantaged students, primarily in high school and college, GEAR UP builds partnerships with entire schools in low-income communities, with an emphasis on middle schools.

Many of these kinds of efforts are working to encourage and provide students with the meaningful support and connections they need to succeed. In the public arena alone, there is a virtual cornucopia of programs that assist and support students from middle school through graduate school.

But alone, they are not enough. In this age, as we face new challenges and new and unique market pressures, it is time to redouble our efforts.

In this Summit and in future meetings, I hope we can develop and discuss new and creative ideas to build a network that will increase the number of minority graduate students.

The potential exists for real change. With leadership from this group, I know we can achieve that change.

INCREASING MINORITY OPPORTUNITIES AND ACHIEVEMENT IN DOCTORAL PROGRAMS

William H. Gray III
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In 1976, the National Board of Graduate Education appointed a special advisory group that included many well-known educational leaders of the time. This advisory group produced an extraordinary report called *Minority Group Participation in Graduate Education*. That report of two and one-half decades ago described the severe underrepresentation of minorities enrolling in graduate school and receiving doctoral degrees. The report revealed that while African Americans and Hispanics represented over 16 percent of the nation's population, together they accounted for only 6 percent to 7 percent of the graduate school enrollment and around 5 percent of the doctoral degrees awarded each year.

The National Board of Graduate Education expressed the following about the importance of increasing doctorates for minority groups for the United States during the 1970s:

> Increased minority participation in graduate education is an important goal to be realized for the social, economic, intellectual and cultural well-being of all persons. It is for the collective benefit of society that the representation of minority group persons among those earning advanced degrees be increased.

This perspective could just as well have been expressed about the current condition of minorities receiving doctoral degrees.

The year after the National Board of Graduate Education released this seminal report, the nation's doctoral-granting universities awarded a total 33,222 doctoral degrees; only 3.8

percent (1,253*)* of those degrees were awarded to African Americans and another 1.6 percent (522) were awarded to Hispanics for a combined 5.4 percent (1,775) doctoral degrees awarded to the two major underrepresented minority groups. Two decades later in 1996, the most recent year for which national data are available, 44,672 doctoral degrees were awarded by the nation's 330 doctoral-granting universities, 3.5 percent (1,569) were awarded to African Americans and another 2.1 percent (951) to Hispanics.

On the surface this appears to be little progress. But although the percentage that African Americans (3.5 percent) and Hispanics (2.1 percent) comprise of total doctorates in 1996 is not much different than in 1977, the number of African American doctorates annually (1,569) is 25 percent more today than in 1977 and the number of Hispanics (951) is 82 percent greater today than in 1977. The number of whites receiving doctoral degrees in 1996 is 2 percent less than in 1977.

The greatest growth over the past two decades in annual doctoral degree recipients has been among Asians, with a 279 percent increase in the number of doctorates, and among international students, with a 206 percent increase. International students (non-citizens) represented 11.3 percent of doctoral degree recipients in 1977 and 26.6 percent in 1996.

In addition to the increased number of African Americans and Hispanics receiving doctorates each year, another sign of progress, albeit modest, is revealed by the fact that there has also been a change in the major field distribution. For example, in 1977, 2 percent (23) of African American doctoral recipients received their degrees in engineering, 6.74 percent (77) in the life sciences, and 9.19 percent (105) in psychology. In contrast, in 1996, 5.8 percent (69) of African Americans received their degrees in engineering, 12.7 percent (152) in the life sciences, and 12.7 percent (152) in psychology. In 1977, 60 percent (685) of African American doctoral degree recipients received their degrees in education, but by 1996, this percentage dropped to 45.7 percent (545). (See Table 2A at the end of this section titled “Number of Doctoral Degrees Awarded to African Americans by Major Field Group (1977–1996).” In 1996, even outside education, African Americans received only 8.2 percent of the doctoral degrees.

So while a decline in the proportion of African American education degrees is expected, the number of education doctorates awarded to African Americans also needs to be increased.

Over the past two decades, the nation's graduate institutions have awarded more than 25,000 doctoral degrees to African Americans and more than 10,000 to Hispanics. Interestingly, these numbers are similar to the number of African Americans (27,000) and Hispanics (12,000) who occupy faculty positions in the nation's colleges and universities. African Americans represent just 4.9 percent and Hispanics, 2.4 percent of the nation's faculty.

Despite the rather modest increase in the number of African American and Hispanic doctoral degree recipients over the past two decades, the prospect for growth in minority representation among doctoral degree recipients looks favorable.

I am optimistic!

My optimism about growth in minority representation in doctoral education is based upon eight indicators. First, I will list these eight indicators, and then I will briefly present the challenges that we as leaders in education face to ensure that we achieve the best results. The indicators are:

1. the growing aspirations and expectations of minority high school students to attain both baccalaureate and post-baccalaureate degrees;[1]

2. the growing number and percentage of minority high school graduates who go on to college immediately after completing high school; [2]

3. the growing number and representation of minorities enrolling in four-year colleges and universities in pursuit of a baccalaureate degree; [3]

4. the growing number and representation of minorities receiving a baccalaureate degree; [4]

5. the growing number of minorities taking the Graduate Record Examination (GRE), which is required by most of the nation's graduate schools for admissions and is often used to make graduate school financial aid decisions; [5]

6. the growing number of minority bachelor's degree recipients entering graduate school immediately after completing college;[6]

7. the growing minority enrollment in graduate school;[7]

8. the knowledge we have gained about methods for improving opportunities for students to enter and complete Ph.D. degree programs.[8]

This eighth and final indicator of a more promising future is the knowledge that we have gained during the past two decades about how to offer both financial support and programs that inspire and assist undergraduate and graduate minority students to obtain doctoral degrees. Several initiatives have been attempted by foundations, corporations and universities, but I will briefly describe two successful national efforts. One initiative is by a major leading not-for-profit educational organization, The United Negro College Fund (UNCF), and the other by one of the nation's leading foundations.

In 1995, UNCF received a $20 million grant from the Merck Corporation for 10 years to identify and support promising undergraduate and graduate students to pursue Ph.D.s in science, and to support minority post-doctoral biomedical scientists (fellows) to carry out their research. Through this program, we honor about 40 students each year: about 15 undergraduate science students, 12 graduate students and about 10 post-doctoral scientists. The Merck Corporation grants permit UNCF to award grants to the students and post-doctoral biomedical scientists and grants to the academic departments of the students and post-doctorates in order to support the work of the fellows. The program

also includes an internship that allows the fellows to work for a couple of months during the year with Merck scientists in their research laboratories in New Jersey. Each year, the competition is open for African American science students from both majority and minority colleges and universities. Since 1996, the first year that grants were awarded, UNCF has made 149 awards. Thirteen of the undergraduates have entered Ph.D. programs, and 15 of the graduate fellows have received their Ph.D. degree since the program began in 1996.

The UNCF/Merck program has three critical elements that we believe are important for minority students to succeed in obtaining their Ph.D.: first, financial support for students; second, financial support for academic departments to support the specific needs and goal attainment of students (including mentoring, research and other support that students require); and third, exposure and experience for students to practice being scientists in world-class laboratories with some of the world's leading scientists.

A second initiative is the Mellon Minority Undergraduate Fellowship (MMUF) program. Since 1988, the Mellon Foundation has invested $22 million to work with 39 UNCF colleges and universities, plus 27 other leading colleges and universities to assist minority undergraduate students (African Americans, Hispanics and American Indians) in preparing for Ph.D. programs in the humanities, arts and sciences. Over the past decade, this program has supported 195 undergraduate students with stipends to permit them to focus on their academic work rather than take jobs to support their educational expenses. The program also has provided support for faculty mentors to work closely with undergraduate students. The Mellon Foundation also has provided loans ($10,000) to students, which are forgiven after the student has enrolled in a doctoral program and made substantial progress toward a Ph.D.

During the 10 years of the Mellon Foundation Program, 195 MMUF Fellows have entered graduate school and 71 have earned master's degrees; 68 have reached the candidacy stage of their doctoral programs and 19 have received Ph.D. degrees; and 74 have enrolled in or completed professional school. Of the 594 students, only 7 have

withdrawn from Ph.D. programs, and 30 have decided not to go to graduate or professional school.

Like the UNCF/Merck science initiative, the MMUF program provides financial support for promising undergraduate students, support for mentors, and financial support for fellows while they are attending graduate school. The loan forgiveness dimension of the MMUF program provides an incentive for students to succeed in their doctoral programs.

In order to achieve an adequate supply and sufficient representation of minorities with doctorates, the nation needs to increase the annual number of graduates four-fold. The past two decades since the National Graduate Education Board's report *Minority Group Participation in Graduate Education* has revealed to us that bringing the issue of minority underrepresentation to the public's attention is an important start, but much more aggressive action following the report is needed to make progress. Today, approximately 466 universities award doctoral degrees in the United States, but only 234 award doctoral degrees to African Americans and 210 to Hispanics. Twenty five universities, led by Howard University, award 40 percent of the doctoral degrees to African Americans and a different collection of 25 award 40 percent of the Ph.D.s to Hispanics annually. A national strategy that encourages more universities to produce larger numbers of minority doctorates is needed.

Roughly the same percentage of new African American doctoral degree recipients enter faculty jobs in colleges and universities (53 percent) when they receive their degrees as their White counterparts. While 22 percent of White doctoral degree recipients take positions in private industry, only 10 percent of African Americans take such positions. On the other hand, 26 percent of recent African American Ph.D. recipients have taken positions in elementary and secondary schools and not-for-profit organizations, compared with 18 percent of Whites (National Research Council 1998).

I leave you with the following five suggestions, based upon our research and experience, for inclusion in your agenda as you formulate strategies to increase minority doctoral degree attainment:

- Start early in identifying young talented minority students, ensuring that they receive the most challenging elementary high school curricula. Higher education leaders must work more closely with school reform leaders throughout the nation. Focus especially upon the 70 percent of African Americans and 60 percent of Hispanics who indicate that they expect to achieve at least a baccalaureate degree and the half of those who aspire toward post-baccalaureate degrees.

- Increase the emphasis upon preparing undergraduate students to enter and succeed in graduate school. The UNCF/Merck science initiative and the Mellon Foundation's fellows programs are two examples. The nation's historically black colleges—where 24 percent of this year's African American Ph.D. recipients received their baccalaureate degrees, and 40 percent of the nation's Ph.D. recipients received their bachelor's degree—provide many additional places to find successful strategies for preparing minority undergraduate students for graduate school.

- Seek to learn more about the experience that minority students are having in doctoral programs. Our knowledge is sparse about the funding arrangements for minority doctoral students or the opportunities available to them as research assistants and teaching assistants. These are just a few of the important experiences that seem to earn students the mentoring relationships that are vital for success in doctoral programs and in research and faculty careers beyond their doctoral programs.

- Seek ways to encourage more universities to share in the role of producing minority doctorates and reward the ones that are currently leading the way—like Howard University, Ohio State University, University of Michigan and Clark Atlanta University. These universities are producing the lion's share of minority doctorates. The UNCF/Merck science initiative and Mellon Foundation programs provide modest

financial support for the academic departments of their respective fellows. Perhaps more foundations, corporations and government agencies could provide such rewards.

- Finally, conduct and disseminate research that keeps track of national and institutional progress in increasing minority doctoral degree production. We benefit when we have access to data and information about such matters as the growing pool of minority baccalaureate degree recipients available for graduate universities to recruit, or about the programs and strategies that work in increasing the number of minorities achieving doctoral degrees.

Your work is extremely important for raising the issues and crafting the solutions to the persistent under-supply of minorities who have the credentials to assume important roles in higher education and industry. In 1996, the 27,212 African American faculty represented just 4.9 percent of the nation's college and university faculty. The 13,000 Hispanics represented just 2.4 percent of the nation's faculty. Over two-thirds of the nation's African American faculty reside and work in the South, and about 25 percent of them work in historically black colleges and universities. The nation needs four times its current number of African American faculty in order to have representation that resembles the nation’s African American population and to have a sufficient supply to distribute throughout the nation. African Americans and Hispanics represent an even smaller percentage of scientists in industrial research laboratories than they represent in higher education. Because these are at the end of the education pipeline, they have been the most elusive targets. This is why I applaud and agree with our outstanding national educational leaders, Secretary of Education Riley and President Swygert of Howard University, which awards the most Ph.D.s to African Americans, for convening this important leadership summit on doctoral education. I await the results of your efforts and creativity in crafting strategies for further progress.

As you carry out your work on this important issue, just keep in mind that doctoral education is an established part of the African American tradition in the United States. It is not something new or a value that has to be created today. Edward Bouchet was one of

the first Americans to receive a doctoral degree in the United States when he graduated with a Ph.D. in physics from Yale University in 1876. This was just 16 years after the first doctoral degree was awarded in the United States at Yale University in 1861. You will also recall that W.E.B. DuBois received the first doctoral degree that Harvard University awarded to a black person over 104 years ago–in 1895. So the challenge that you face is building upon a rich tradition that was established in the African American community over 120 years ago by encouraging and supporting larger numbers of African Americans to follow in the footsteps of such great scholars as Edward Bouchet, W. E. B. Du Bois, and Ernest E. Just. Just, the world's premiere zoologist and physiologist, received his Ph.D. from the University of Chicago in 1916 and served on the faculty here at Howard University for over 20 years. So, figure out a way to tell the stories of these great Americans to inspire larger numbers of current and future generations of minorities in America to succeed in doctoral education. Academic achievement and excellence are not new for African Americans and Hispanics. But we must remove barriers, provide financial assistance, create access to mentoring and research opportunities, and tell the story of academic achievement and excellence. Despite, and in spite of, de jure and de facto denial of many of these keys to doctoral success, we must tell a new generation to keep climbing, to keep achieving, and to sing with poet Maya Angelou, "Still we rise!"

Notes

[1]The first indicator is the growing aspirations of minority high school students to attain baccalaureate, graduate and professional degrees. The National Education Longitudinal Survey (NCES) reveals that 70 percent of African American high school students in the 1990s expect to complete at least a bachelor's degree, and one half of those (35 percent) expect to receive either a professional or graduate degree. The comparable percentages for Hispanics are 62 percent and 30 percent. When the same question was asked of high school students in the 1980s, one-half the proportion of 1990s students expected to achieve both baccalaureate and post-baccalaureate degrees. So today's high school youngsters are developing expectations, which is a vital first step. The challenges for education leaders are to ensure that the students who aspire and expect to attain graduate degrees are being adequately prepared in their elementary and high schools to: a) meet high academic standards in high school; b) successfully complete high school; and c) gain admission into colleges that will prepare them for doctoral programs. The on-time high school graduation rates of African Americans (79 percent) and Hispanics (78 percent) continue to lag behind Whites (90 percent), and while a larger number of African Americans and Hispanics are taking the ACT and SAT for college admissions, there is still a very large gap between African Americans and Hispanics and Whites on these college admissions tests. The average scores of African Americans are more than 100 points below Whites on each of the two parts (verbal and math) of the SAT. African American and Hispanic high school students need access to high-quality schools, high-quality curricula, expert teachers, and better preparation for admissions tests during high school.

[2]The second indicator of a promising future for minorities in doctoral programs is the growing percentage of minority high school graduates who are continuing their education at the post-secondary level. Fifty percent of African American and 49 percent of Hispanic high school graduates progress into college within one year of graduating from high school. These rates continue to lag behind the White college-going rate of 60 percent, but they are the highest rates yet observed for both African Americans and Hispanics.

In addition, the growth over the past two decades in first-time, full-time freshmen among African Americans (15 percent) and Hispanics (190 percent) has exceeded the population growth of traditional college-age African American (10 percent) and Hispanic citizens (110 percent) over the same period of time. In 1996, African Americans represented 11.3 percent and Hispanics, 6 percent of the nation's first-time, full-time college freshmen. These are the highest levels of representation ever.

[3]The third and fourth indicators are the rates of growth in African American overall college enrollment and baccalaureate degree completion. The 726,326 African Americans enrolled in four-year colleges and universities in 1996 represented 10.7 percent of the nation's four-year college enrollment, and the 421,454 Hispanic students represented 6.2 percent. Although these percentages are lower than the 14.3 percent and 10.2 percent that these two groups make up of the entire college-age population, these numbers and percentages among college and university enrollments have never been higher for both groups.

In addition to continuing to increase the numbers and representation of minority undergraduate students, education leaders must confront major challenges regarding increasing doctorates among undergraduate students in underrepresented groups. These challenges are:

- Ensuring that a higher percentage of those who enter college succeed in graduating. Currently 57 percent of Whites who enter four-year colleges and universities graduate within five years, compared with 45 percent of African Americans and 49 percent of Hispanics.

- Ensuring that minorities who receive a bachelor's degree achieve a high grade-point average. Today, around 40 percent of African Americans, 30 percent of Hispanics and 24 percent of White students who are pursuing bachelor's degrees have first-year grade point averages of 2.0 or lower. More than 54 percent of African Americans and 38.2 percent of Hispanics who

graduate with a bachelor's degree have grade-point averages below 3.0, compared with 27 percent of Whites.

In 1996, 89,412 African Americans and 56,899 Hispanics earned baccalaureate degrees in the United States. Each group represented the highest proportion of bachelor's degree recipients that they have ever represented—at 7.7 percent for African Americans and 4.9 percent for Hispanics. But both groups continue to represent a smaller share of bachelor's degree recipients than they represent among four-year college enrollments, and narrowing this gap is yet another challenge for us to vigorously pursue. At the same time, however, substantial numbers of minority students (89,412 African Americans and 56,869 Hispanics*)* are available for the nation's universities to recruit into doctoral programs—that's 50 percent more than there were a decade ago.

[6]The fifth and sixth indicators are the growing number of African Americans and Hispanics who are taking the GRE and then going immediately into graduate school after receiving their bachelor's degrees. In 1998, 10 percent of African American bachelor's degree recipients and 12 percent of Hispanic bachelor's degree recipients took the GRE with the intention of attending graduate school. In 1998, over 22,000 African Americans and over 14,000 Hispanics took the GRE. African Americans represented 9 percent and Hispanics 6 percent of those who took the GRE in 1998.

Over 10,000 more African Americans and nearly 6,000 Hispanics are taking the Graduate Management Admissions Test (GMAT). These figures reveal both the highest level of interest and the effort that African American and Hispanic students are making to pursue graduate school. Much of the challenge before us is to ensure that the numbers and representation that we are seeing at the finish line (receiving doctoral degrees) are as robust as the numbers and representation at the starting line (receiving bachelor's degrees and taking the GRE).

The challenge regarding GRE testing is to eliminate the huge score gaps that exist between African Americans and Whites, and Hispanics and Whites. On the verbal and

quantitative components of the GRE, the African Americans are scoring more than 100 points and Hispanics 70 points below their White counterparts. To the extent that these scores are being used by universities and graduate schools and departments to select students for admission and to award graduate research assistantships, graduate teaching assistantships and graduate fellowships, eliminating these score gaps is very important.

[7]The seventh indicator refers to the increase in the enrollment of minorities in graduate school during the past decade. In 1996, 118,822 African Americans enrolled in the nation's graduate schools, representing 6.8 percent of the total graduate enrollment; also, 80,053 Hispanics enrolled, representing 4.6 percent of the total. (See Table 3A). These enrollments represent a 60 percent increase in African American graduate enrollment and an 80 percent increase in Hispanic graduate enrollment over the levels of eight years earlier (1988).

Table 2A. Number of Doctoral Degrees Awarded to African Americans by Major Field Group (1977-96)

	Engineer	Phys Sci	Math & Com Sci	Life Sci	Psych	Soc Sci	Humaniti	Education	Total
1977	23 (2.0) [0.9]	45 (3.9) [1.4]	11 (1.0) [1.1]	77 (6.7) [1.6]	105 (9.2) [3.8]	123 (10.8) [3.1]	74 (6.5) [2.5]	685 (59.9) [8.6]	1143 (100.0)
1981	24 (2.2) [0.9]	32 (3.0) [1.0]	10 (0.9) [1.0]	105 (9.8) [1.9]	116 (10.8) [3.9]	106 (9.9) [3.2]	65 (6.1) [2.7]	614 (57.3) [7.8]	1072 (100.0)
1987	29 (3.4) [0.8]	25 (2.9) [0.7]	11 (1.3) [1.0]	95 (11.1) [1.7]	90 (10.6) [2.8]	97 (11.4) [3.2]	47 (5.5) [2.3]	457 (57.3) [6.6]	851 (100.0)
1991	45 (4.7) [0.9]	36 (3.7) [0.8]	14 (1.5) [0.9]	113 (11.7) [1.7]	128 (13.2) [3.7]	115 (11.9) [3.6]	53 (5.5) [2.2]	463 (47.8) [6.9]	967 (100.0)
1996	69 (5.8) [1.1]	53 (4.4) [1.2]	17 (1.4) [0.8]	152 (12.7) [1.9]	152 (12.7) [4.0]	136 (11.4) [3.5]	69 (5.8) [2.3]	545 (45.7) [8.2]	1193 (100.0)

Table 2B. Number of Doctoral Degrees Awarded to Hispanics by Major Field Group (1977-96)

	Engineer	Phys Sci	Math & Com Sci	Life Sci	Psych	Soc Sci	Humaniti	Education	Total
1977	25 (5.0) [1.0]	42 (8.5) [1.3]	18 (3.6) [1.7]	52 (10.5) [1.1]	56 (11.3) [2.0]	63 (12.7) [1.6]	77 (15.5) [2.6]	164 (33.0) [2.1]	497 (100.0)
1981	23 (5.2) [0.9]	27 (6.1) [0.9]	6 (1.4) [0.6]	68 (15.3) [1.2]	73 (16.4) [2.5]	53 (11.9) [1.6]	56 (12.6) [2.4]	140 (31.4) [1.8]	446 (100.0)
1987	67 (8.2) [1.8]	64 (7.9) [1.7]	15 (1.9) [1.4]	88 (10.8) [1.6]	227 (27.9) [7.1]	67 (8.2) [2.2]	81 (10.0) [3.9]	204 (25.1) [3.0]	813 (100.0)
1991	50 (7.1) [1.0]	73 (10.3) [1.7]	19 (2.7) [1.2]	97 (13.7) [1.5]	148 (20.9) [4.3]	69 (9.8) [2.2]	88 (12.4) [3.7]	164 (23.2) [2.5]	708 (100.0)
1996	84 (9.0) [1.3]	70 (7.5) [1.5]	17 (1.8) [0.8]	163 (17.4) [2.1]	191 (20.3) [5.1]	93 (9.9) [2.4]	99 (10.5) [3.3]	222 (23.6) [3.3]	939 (100.0)

Notes: The following note applies to the first table above, Table 2A. The first number in each cell is the number of doctorates awarded to African Americans in the year listed (e.g., in 1977, there were 23 doctorates awarded to African Americans in engineering). The second number, in parentheses, is the fraction of all doctorates awarded to African Americans by major field group in the year listed (e.g., in 1977, 2.0 percent of all doctorates awarded to African Americans in this year were in engineering; by 1996, this number had risen to 5.8 percent). The third number, in brackets, is the percentage of the total number of doctorates awarded to all races that are awarded to African Americans in the specific year and field group (e.g., in 1977, 0.9 percent of all engineering doctorates were awarded to African Americans, and 91.9 percent were awarded to other races; by 1996, this percentage had risen to 1.1 percent). Table 2B follows the same pattern for Hispanics.

Source: Intergrated Postsecondary Education Data System (IPEDS) via Webcaspar.

Table 3A. Graduate School Enrollment by Race for Selected Years. (The percentage of total graduate school enrollment for each racial group is in parentheses.)

	African American	Indian/ Alaskan	Hispanic	Asian	White	Non-US Citizen	Total
1988	73.111 (5.1)	5,376 (0.4)	46,628 (3.2)	44,040 (3.1)	1,120,186 (77.8)	150,229 (10.4)	1,439,570 (100.0)
1991	89,097 (5.4)	6,638 (0.4)	60,096 (3.6)	57,752 (3.5)	1,258,159 (76.3)	177,210 (10.8)	1,648,952 (100.0)
1995	118,822 (6.8)	8,454 (0.5)	75,843 (4.4)	80,053 (4.6)	1,282,487 (73.5)	179,471 (10.3)	1,745,130 (100.0)

Table 3B. Graduate School Enrollment by Sex for Selected Years. (The percentage of total graduate school enrollment for each sex is in parentheses.)

	Female	Male	Total
1977	620,639 (46,9)	703,265 (53.1)	1,323,904 (100.0)
1980	673,502 (49.8)	677,766 (50.2)	1,351,268 (100.0)
1984	678.547 (50.1)	675,007 (49.9)	1,353,554 (100.0)
1991	884,526 (53.6)	764,426 (46.4)	1,648,952 (100.0)
1995	973,193 (55.8)	771,937 (44.2)	1,745,130 (100.0)

Source: IPEDS via Webcaspar.

Table 4A. Top 25 Universities that Awarded the Most Ph.D.s to African Americans in 1996.

Academic Institution	Number Awarded
Howard University	64
Nova Southeastern University	55
United Theological Seminary	48
Ohio State University, Main Campus	39
University of Michigan at Ann Arbor	33
Union Institute	33
Virginia Polytechnic Institute and State University	30
Walden University	25
University of Maryland at College Park	23
University of California-Los Angeles	23
Temple University	23
University of Illinois at Urbana-Champaign	21
University of Southern California	20
Michigan State University	19
Clark Atlanta University	19
Texas Southern University	18
Illinois State University	18
Wayne State University	17
Stanford University	17
University of Virginia, Main Campus	16
University of Texas at Austin	15
George Washington University	15
University of Alabama	14
University of South Florida	13
University of Minnesota	13
Number of institutions that awarded at least one doctorate to an African American in 1996	269
Percentage of total doctorates awarded to African Americans by these 25 institutions in 1996	39.5%

Source: IPEDS via Webcaspar

Table 4B. Top 25 Universities that Awarded the Most Ph.D.s to Hispanic Americans in 1996.

Academic Institution	Number Awarded
Caribbean Center for Advanced Studies	42
Texas A&M University, Main Campus	29
University of Puerto Rico, Rio Piedras Campus	28
University of Texas at Austin	26
University of California-Berkeley	26
University of New Mexico, All Campuses	24
University of Wisconsin-Madison	22
University of California-Los Angeles	22
University of Southern California	21
Arizona State University, Main Campus	19
University of Arizona	18
Harvard University	18
Florida International University	18
Stanford University	17
University of California-Santa Barbara	16
Michigan State University	16
University of Miami	15
University of California-San Diego	14
University of California-Davis	14
CUNY Graduate School and University Center	14
Nova Southeastern University	13
University of Washington-Seattle	11
University of Michigan at Ann Arbor	11
Pennsylvania State University, Main Campus	11
University of Houston	10
Number of institutions that awarded at least one doctorate to an Hispanic American in 1996	210
Percentage of total doctorates awarded to Hispanic Americans by these 25 institutions in 1996	45.9%

Source: IPEDS via Webcaspar

ACCOUNTABILITY IN ASSESSING DIVERSITY IN DOCTORAL EDUCATION

H. Patrick Swygert
President, Howard University

I would like to thank everyone who has joined us for this important conference. Our conference began with a marvelous set of presentations, one by Secretary of Education Richard Riley and the other by former Congressman and current president of The United Negro College Fund, William Gray. I would like now to articulate the philosophical basis for our conference discussions. Secretary Riley will follow with additional supportive information.

This dialogue is a continuation of a conversation that began last year. Indeed, it began nearly a year ago during a unique gathering of African American presidents of majority group institutions, a fraternity to which I belonged during my tenure at the State University of New York at Albany. We had two principal speakers at that gathering: David Longanecker, former assistant secretary for postsecondary education, and the chief of staff of the principal House Appropriations Committee. The issue of discussion was higher education. Some things that we discussed were idiosyncratic; that is, they related almost entirely to the experiences of minority leaders on majority campuses. But other topics were far more global in their implications—especially the issue of diversity and graduate education.

In November of last year, another conversation took place. Again, Assistant Secretary Longanecker and members of his staff, including Catherine LeBlanc and others who are again involved in this conference, were among the participants. Along with the Council of Graduate Schools, we focused our attention more directly on the question of diversity in graduate education. Later we thought that revisiting the topic in a third conversation would be helpful—one in which we would invite leaders from around the nation who

represent a diversity of institutions—all engaged in graduate education and all concerned with and committed to diversification in doctoral education.

It is hoped that this meeting will serve as a focal point from which we will begin efforts to spearhead an eventual White House conference later this year or early next spring. I have raised this issue with Assistant Secretary Longanecker, and it is apparent that we both are optimistic about the possibility of the White House meeting. So out of these conversations, discussions and dialogues, I think something substantial is evolving and that it will continue to evolve with the participants at this conference.

Congressman Bill Gray raised two issues in his keynote address that I would like to discuss because I believe that they provide a significant context for the issue at hand and, therefore, deserve repeating. The first point that he stressed involved the history of achievement and success of historically black colleges and universities (HBCUs), both in undergraduate and graduate education. Dr. Gray examined the traditions found on HBCU campuses, traditions that made no concessions to mediocrity or anything less than best effort.

As we consider the topic of diversity in doctoral education, we must remind ourselves of the importance of access as it relates to excellence. Indeed, access and excellence have never been viewed by the HBCUs—nor should we view them today—as inconsistent with each other. The history of HBCUs and their efforts give life to the notion that access and excellence are not inconsistent.

If I may, I would like to make two specific references to individuals present at this meeting who represent and serve as exemplars of the kind of success that Bill Gray referred to in more general terms. Specifically, I speak of Chancellor (Edward) Fort of North Carolina A & T State University, an institution that has distinguished itself in both its graduate and undergraduate educational programs in engineering. Additionally, there is Provost (Deidre) Labat of Xavier University of Louisiana, an institution that is "preeminent," if you will, in sending graduates on to health-related degrees and careers.

Also in attendance is the president of the presidents, the president of the National Association for Educational Opportunity, which represents many of the HBCUs. He is President Earl Richardson of Morgan State University.

The second key point articulated by Dr. Gray was the need for consistency of purpose. One extracts from the remarks of the secretary and those of Bill Gray almost a sense of buoyancy, enthusiasm and optimism. For, as both indicated, we have succeeded in many ways in increasing the number of underrepresented minorities in graduate education—and more particularly at the level of the Ph.D.—across a wide range of disciplines. While we recognize that much remains to be accomplished, I think we should share in their eloquently expressed enthusiasm.

Simultaneously, I believe that we cannot afford simply to congratulate one another on a job well done. Not only does more need to be done, but, as we have seen in recent developments and read about recently in the public media and otherwise, efforts are under way—in fact, efforts that have matured—that may have the effect over time of lessening, if not stopping, much of the progress that is under way. I hope that during the course of our subsequent conversations in this conference, we can talk more about these efforts and how we are responding to them.

As an aside, I would like to mention that in recent conversations with my former colleagues in the State University of New York system, I asked how the SUNY system was responding to some of these efforts and I was reminded that in the SUNY system, the response is no response at all. In other words, SUNY's philosophy is "We're going to continue to do what we've been doing until such time as we're told not to do it." I think this kind of response indicates a kind of institutional arrogance, but it may be arrogance that is in a sense well-placed in that perhaps on some campuses and in some institutions, doing nothing may indeed be an appropriate strategy in the long-term. It certainly should not, however, be a universal strategy—though on some campuses, it may be working.

What I'm concerned about, however, is the fact that some of us who say we're not going to do anything different perhaps are not doing what we used to do with quite the same enthusiasm and quite the same focus and purpose.

Thus, where we have had some success and feel that we can congratulate ourselves with a victory parade, I think we should ask ourselves the following questions (in the context of success with recruitment, retention, and graduating Ph.D. candidates): (1) Are those lessons transportable and, if so, how should they be transported—in other words, how should we get the word or the message out? and (2) What are the models and best practices and what can we do to assure that they are disseminated? and (3) How do we measure success?

Clearly, success must be measured in more ways than simply in numbers. It has to be more than "I graduated more Ph.D.s in the humanities than you graduated in the humanities." Success should be, in my view, more than simply about box scores, although, as Americans we cannot escape two features of our national character. First, we're idealists. We really believe in the ideals inherit in the Constitution and Declaration of Independence. We are an idealism-driven people.

Second, we like to be counted. Being number one is important, whether it is number one in idealism or number one in rhetoric or number one in whatever we do. One of the ways in which the newspaper *USA Today* succeeded when it first appeared (even though it had previously been dismissed, if not disparaged) was that it raised box scores to a high level. That newspaper is full of box scores—the number one, the top ten, the top five, the top 50. And although as a nation we are fixated on this type of simplified ranking, graduate education is a far more complex enterprise. While numbers are important, we need to find ways to measure or quantify our best efforts. And if one observes real effort by an institution, by a dean of a graduate school, by a president, by a provost, how is that effort recognized and, indeed, rewarded? Even though the numbers may fall short, numbers vs. perhaps the effort of another peer's accomplishments are also important.

I like to talk about the evolution of a form of index. For example, is it possible to conceive and to craft an index that would not be used to punish or sanction or embarrass, but would be used to spur or encourage?

It seems to me that we have enough intelligence—we have the wherewithal to get our arms around such an index—or at least to get the notion of an index out there as a subject for discussion, because I do think we have reached a point where we need to go beyond the rhetoric, indeed, beyond the idealism. We need to talk about numbers, true, but we need to talk about how we acknowledge and assess effort.

STATISTICAL PROFILE OF MINORITY DOCTORATES

David A. Longanecker
Assistant Secretary
U.S. Department of Education

I wish to thank Patrick Swygert and Jules LaPidus for providing the impetus for arranging this meeting. I remember well the meeting that you had with me in my office at which you basically challenged us to put the meeting together. You said it was about time, and you were right.

My presentation will complement Bill Gray's presentation because everything he has said is exactly consistent with what I will say. From my perspective, the current situation is truly "a good news, bad news" story—in two respects. First, I will discuss some recent trends.

If you look over the last 20 years, the good news is that we have made remarkable progress in those years in the participation of students of color—at the doctoral level in postsecondary education. Over the last 20 years, the share of minority Ph.D.s has doubled, from 8 percent to 16 percent and that is clearly good news.[1]

But the less good news is that we still have a long way to go before we reach parity in participation, which is the term, I believe, that Reginald Wilson coined a few years ago—a concept that should logically be our goal as a society that believes in equity. Compared with the general population, minorities in doctoral education are still substantially underrepresented: 16 percent in doctoral education compared with 26 percent in the population at large. Essentially the same story exists when making comparisons with undergraduate statistics. I also must point out that the overall success really masks the

[1] All data discussed herein are included in more detail at the end of this presentation.

trends that are within these statistics. Some of those trends are positive and some are not so positive. The growth in the participation of Asian Americans has been remarkable and is a remarkable success for American higher education; increasing from 2 percent in 1976 to 8 percent at the present time. But African Americans, Hispanic Americans and Native Americans have had much more modest gains—still gains—but without doubt, this is an area where we need to have continued growth because there is still substantial underrepresentation.

Now, an interesting factoid! If you look at the undergraduate graduation data, there is some positive news. The undergraduate population in American higher education today closely reflects the population of our country. In other words, we have made substantial progress in undergraduate education, and that's important for graduate education as well. This progress suggests that we have a pipeline that will help us move forward. That's pretty good news. It's not great news, and I'll come to the reason for that later.

There also is a second dimension, however, of this good news-bad news scenario. Statistics for 1996 show us *what* not *why*. Now, the statistics can be very helpful to us in understanding why the situation is what it is—and they certainly affect the why. I think sometimes that those of us who love numbers and love to work with them sometimes forget that they are just numbers. We have tried to begin making interpretations from numbers that are beyond what the numbers actually tell us. But there are some ways in which these statistics, these demographics, are driving things and it's part of the second dimension. One of the good things about them is that if you look at the absolute numbers, they show that the gains for all underrepresented groups have not come at the expense of any other ethnic category. Thus, you don't find that the gains for African Americans or Hispanics or Asian Americans are happening at the expense of the majority population.

In fact, we have grown in every category of our population. There have been those absolute increases, and that makes it, from a public policy perspective, much easier to carry the story. And the increases have been most substantial for students from

communities of color. For example, the growth in doctoral degrees over the last decade has been 54 percent—for Hispanics, 33 percent, and for Native Americans, 66 percent. Those numbers are a little different from those presented by Bill Gray. I think Bill was talking about enrollments, and these are doctoral degree recipients. In any event, they are generally along the same trends.

Now, if you look at these trends—and this is where you don't want to go too far—obviously some of this growth has occurred simply due to the increase in the number of people receiving doctorates. And that's good. The other good news is that factors other than simple numbers—your affirmative efforts within the higher education community, for example—are clearly paying high dividends. But, again, I just want to present the facts at this time, not anything else.

The bad news, on the other hand, is that we're going to face a very difficult demographic environment as we move into the future. The minority population in elementary and secondary education, which is essentially our future undergraduate population and our longer-term future graduate population, is twice as large as our current representation in undergraduate degree productivity. So even though our pipeline a couple of minutes ago looked fairly robust compared with today's population, compared with tomorrow's population, that undergraduate population from which we'll soon be getting our students is not large enough. It's not robust enough for us to reach parity in participation. And what that means is that our efforts will require substantial and disproportionate increases in serving minority students, and I would say, incidentally, that students are increasingly coming to colleges and universities from communities of economic disadvantage and language preferences. Traditionally, this country has served these underrepresented groups poorly.

The other bad news, if you will, is something to which Patrick referred: We will face this challenge without some of the effective, affirmative action tools that have been available to us in the recent period of relative success. And that's to a great degree why we're here today having this discussion.

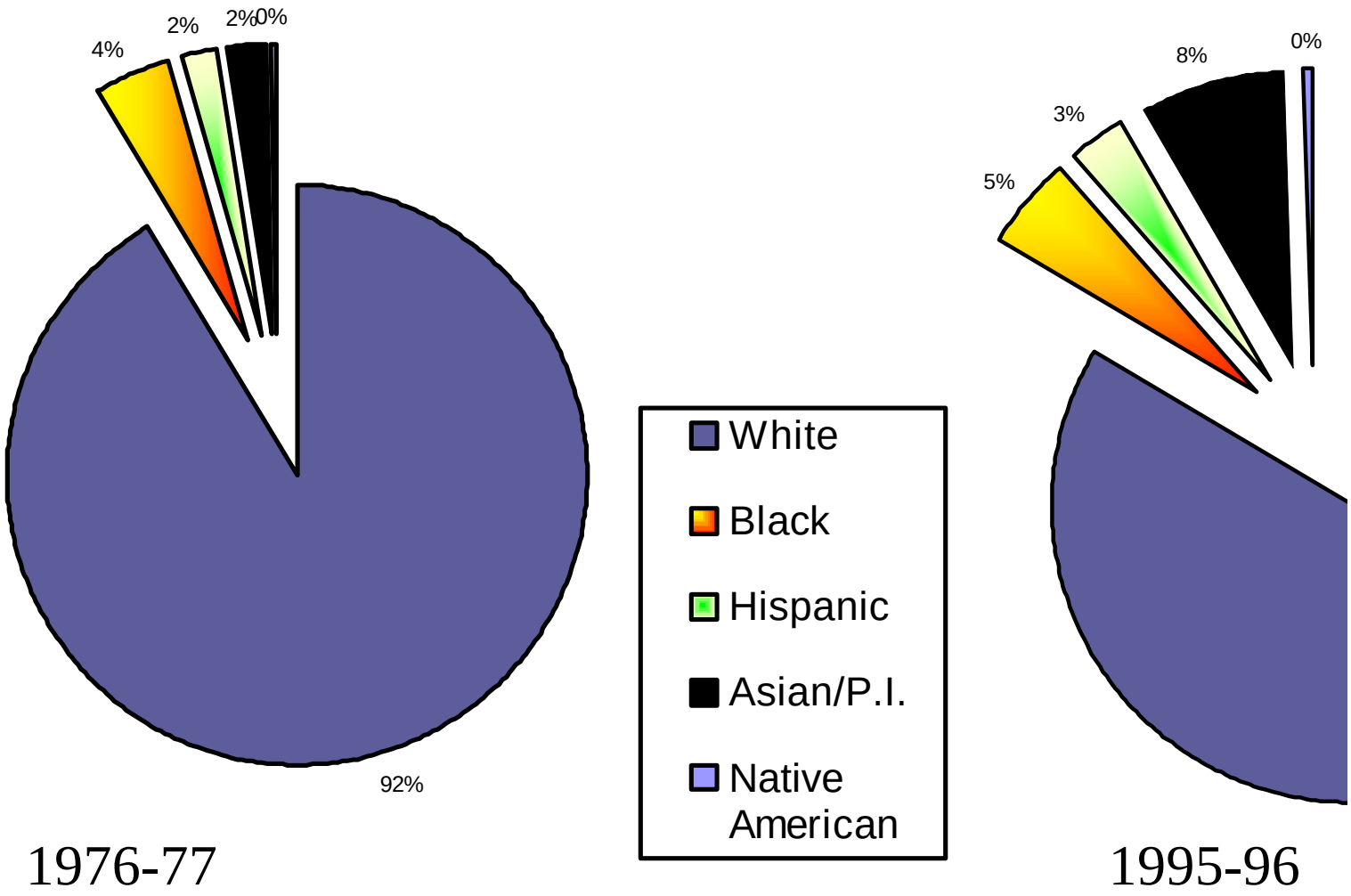
It's also useful to look at this data beyond the aggregate data to see what is happening within disciplines over time. In the six most popular fields of doctoral study, we see really two disparate results: (1) education has been and continues to be a reasonably clear success story with all minority groups showing gains, and (2) it is the field of general study that has the largest percentage of students of color. Now, that's really no great surprise. Education has long been one of the professional areas open to minority students, and to be candid, and I can say this because I have my doctorate in education, it is a field that has lacked some of the prestige of the other areas of doctoral study and so one might have expected these numbers.

There's also a success story, however; with respect to virtually every one of these six areas. There's an increasing share of doctorates being awarded to African Americans and Hispanics and Native Americans in spite of the fact. But I think what's really important is that you see fairly consistent growth over that period of time, in engineering, physical sciences, life sciences, social sciences and humanities. But there are two dilemmas with this—and you can hardly tell that by looking because the base is so small—and that is although we're doubling in some cases the proportionate share, we still have extremely small percentages and are well-underrepresented. One exception—and this is the second outstanding feature is that Asians have done extremely well in virtually all of those areas over the last two decades, much better than any of the other minority groups.

The only other thing I wanted to show you is the share of doctorates to minorities in the various states. This is an interesting statistic to look at, but I don't want to draw too much from this. The numbers really reflect the diverse demographics of the nation more than any unique characteristics or specific efforts under way to prepare people of color at the doctoral level in various areas of the country. They also suggest how difficult it is, I think, to develop national approaches and national consensus around this issue. We're going to need to be reasonably sophisticated, because people could look at this and presume levels of effort or levels of success that may not be represented adequately by simply looking at the numbers, as Patrick has suggested. So the statistics tell us, I think,

a useful, a helpful, and I would suggest a very challenging story as we look ahead. We've made a lot of progress, but much is still needed to achieve parity in the future. I don't think any of us who are interested in this have to worry about whether there's enough work to do for the next few years.

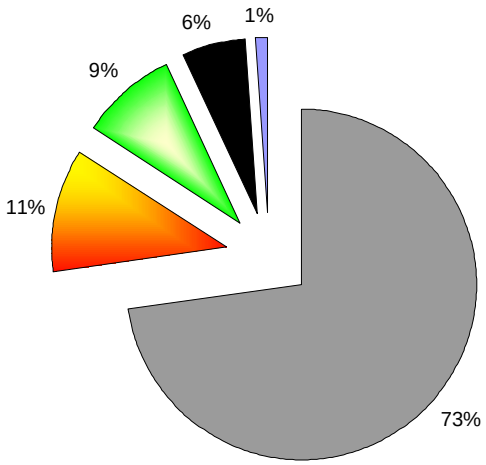
Between 1976 & 1995, the share of doctorates awarded to minorities increased significantly



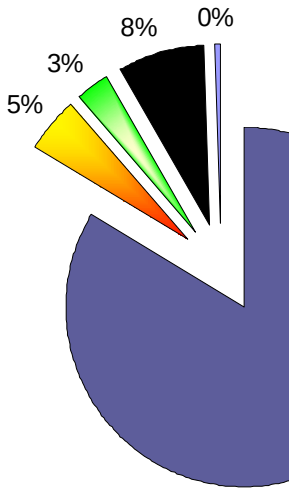
1976-77

1995-96

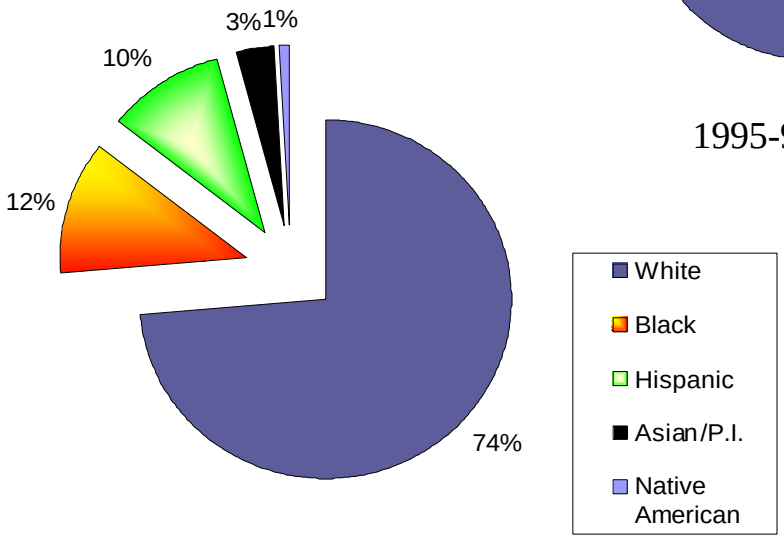
Ph.D.s earned in the United States comparison to the undergraduate enrollment and the U.S. population



1995-96 Undergraduate Enrollment

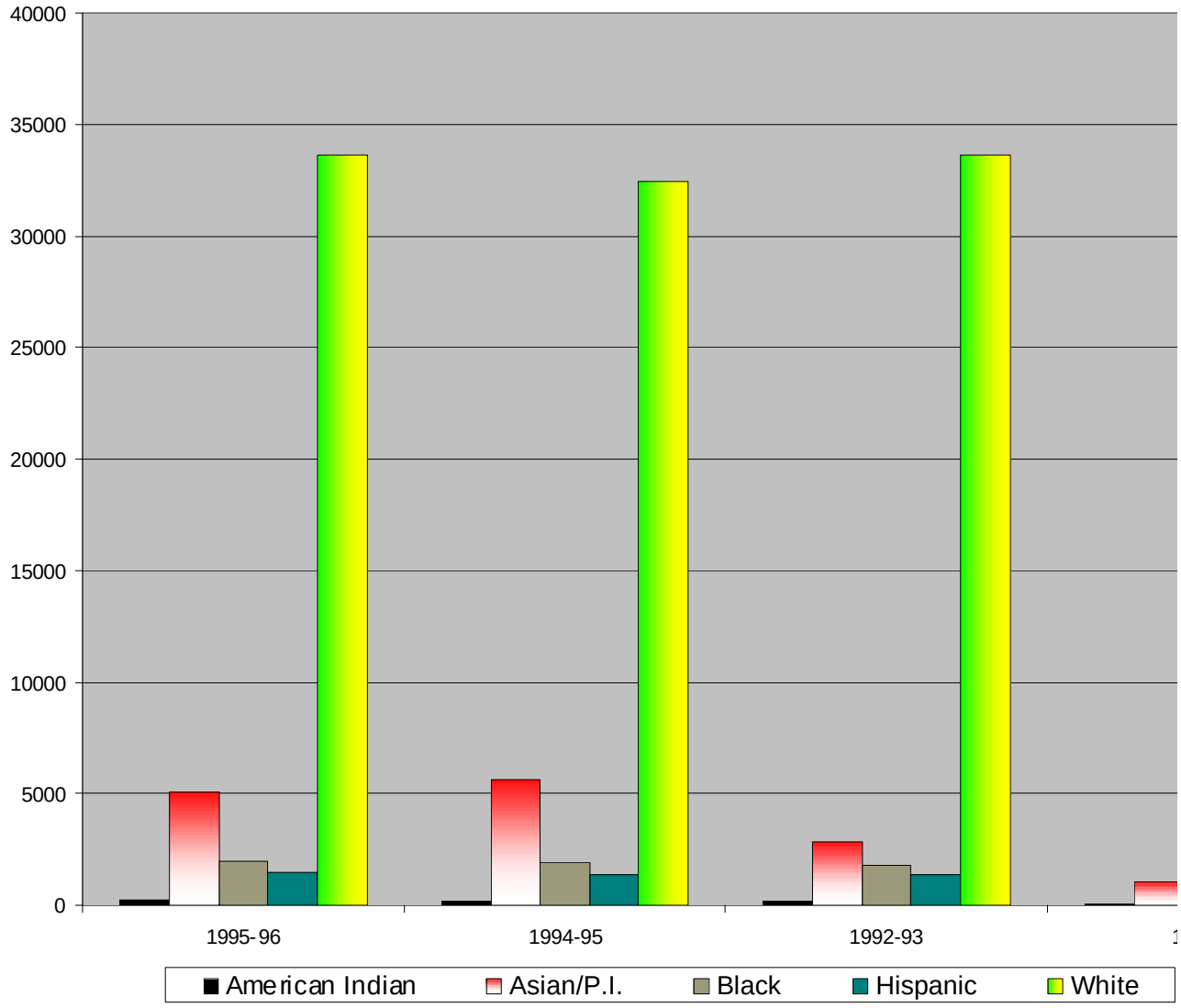


1995-96 Ph

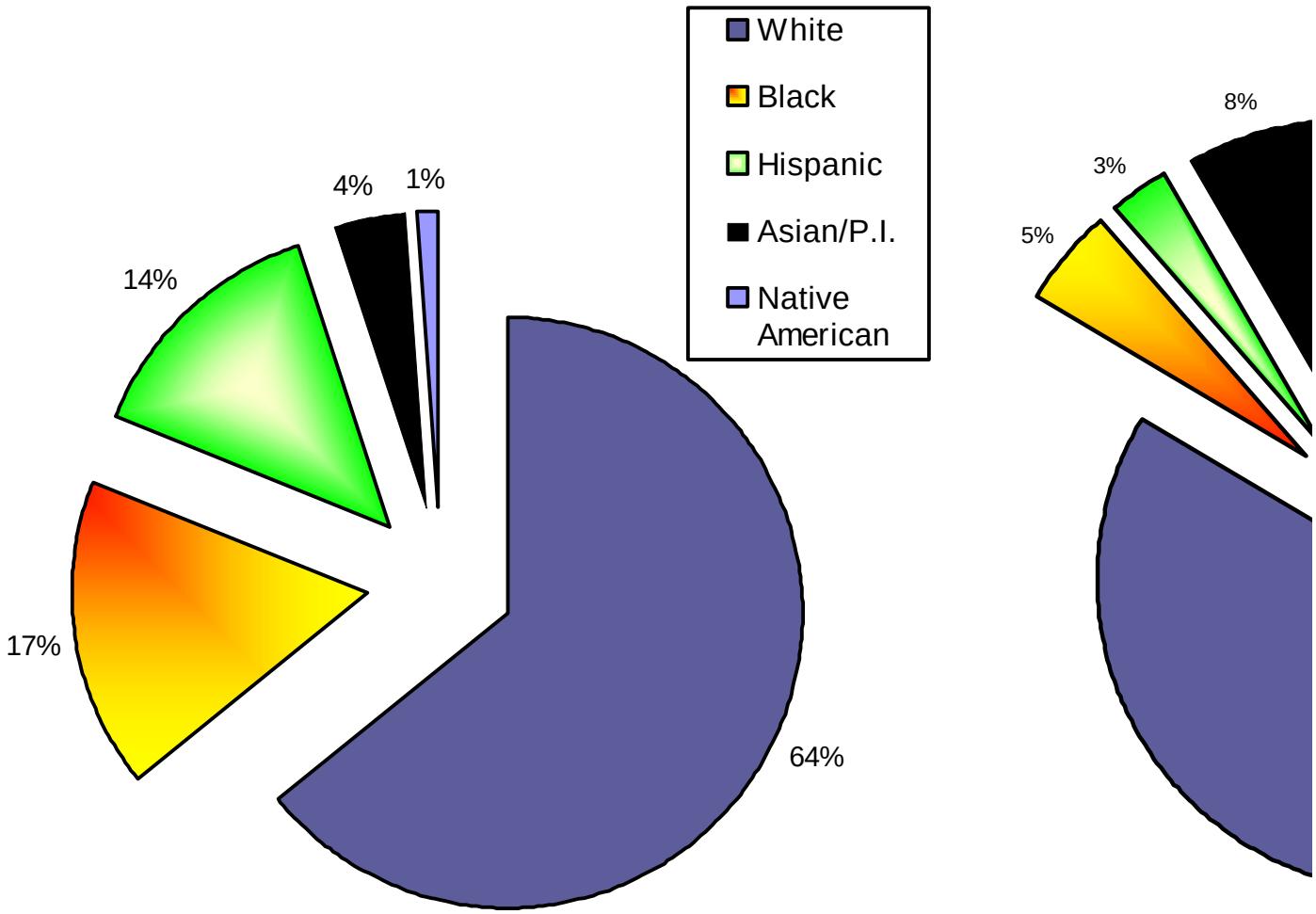


1995 U.S. Population

Gains in enrollment have been the result of all groups increasing

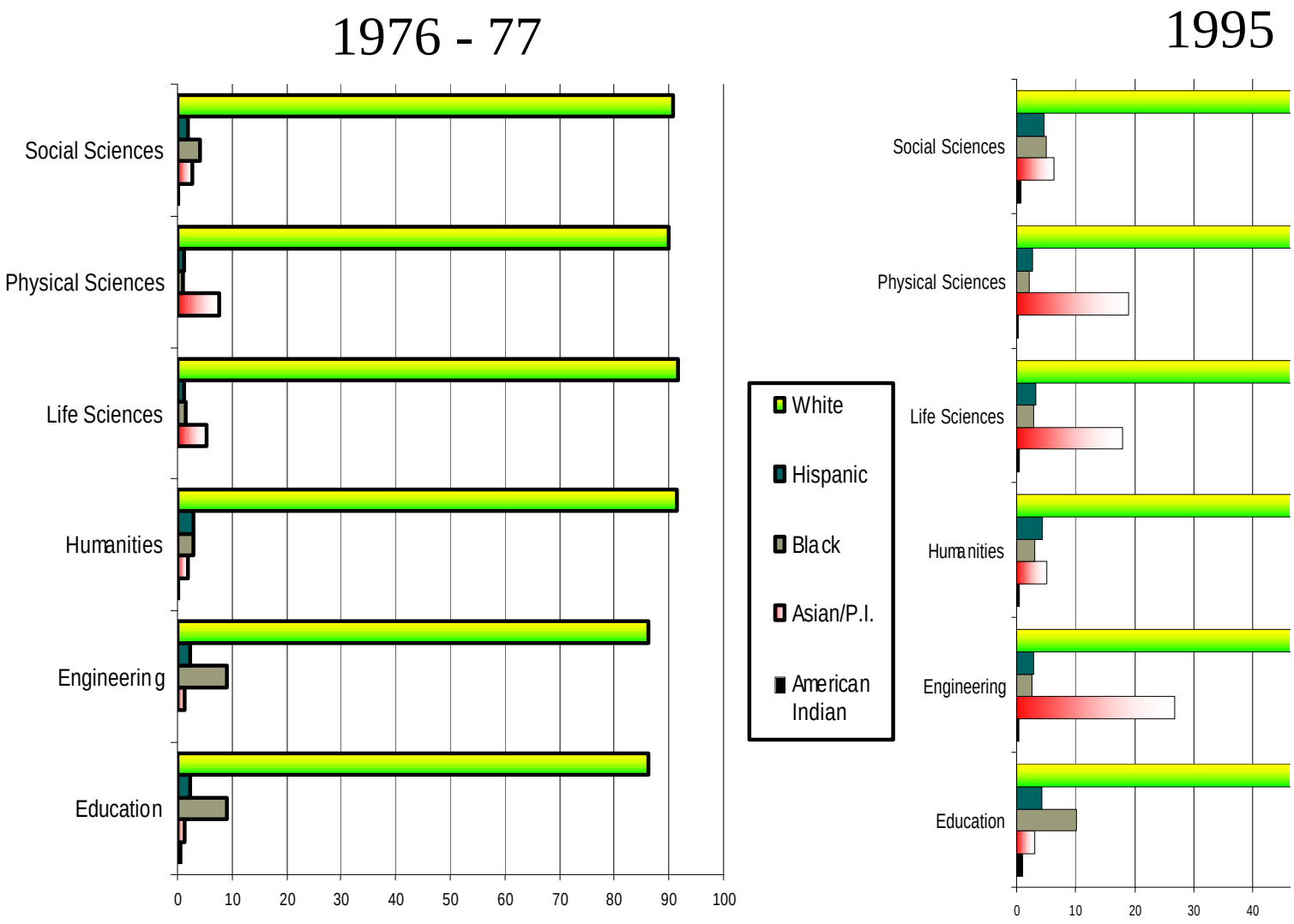


But we must do much more to re
parity with the future U.S. popula

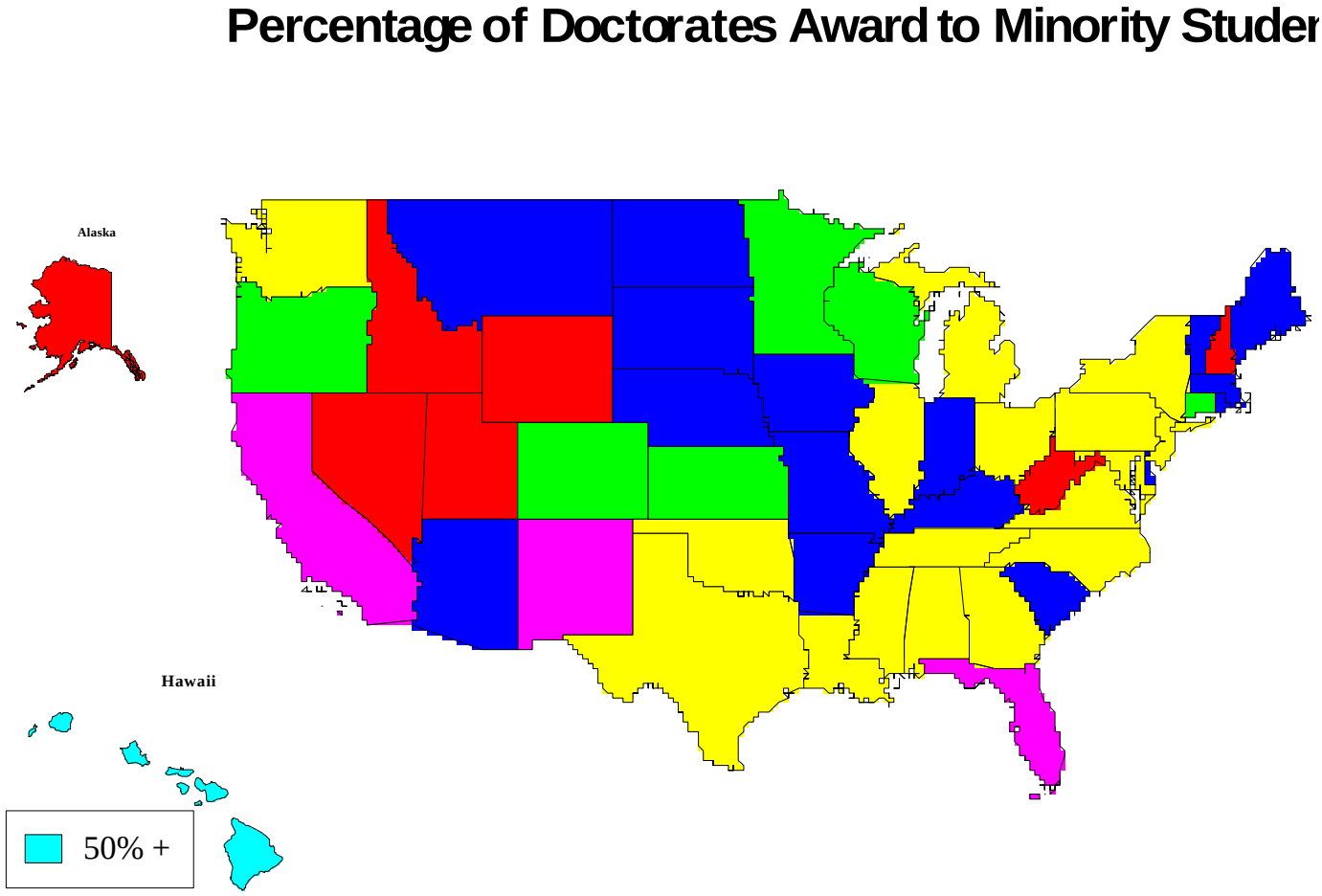


The enrollment of our nation's elementary & secondary schools.

Major fields in which minority doctc students' were enrolled -- then & nc



Share of doctorates to minorities, by states in 19



THE COMPACT FOR FACULTY DIVERSITY: THE SREB MODEL[1]

Ansley Abraham,
Director, Southern Regional Education Board

GOAL OF THE COMPACT

The Compact for Faculty Diversity addresses the shortage of minority faculty members in colleges and universities. It provides academic, social and financial support for ethnic minority students, enabling them to pursue doctoral degrees and to become college professors. Through this support, the Compact seeks to improve the rate of minority students receiving doctorates to diversify the pool of qualified doctoral applicants for tenured college-level positions at a variety of campuses.

FACULTY DIVERSITY: A NATIONAL ISSUE

The professorate continues to be overwhelmingly white. For example, during the period 1975 to 1993, the percentage of white faculty in the United States never dropped below 84 percent. On the other hand, the corresponding percentage of any ethnic minority faculty group never rose above 6 percent. Progress for these minority groups is even less than it appears, considering those minority faculty teaching at predominantly African American and Hispanic institutions. For example, black collegiate faculty members represent almost 5 percent of the over 500,000 college and university faculty members. However, if you remove from consideration those black faculty who teach at the 103 Historically Black Colleges and Universities (HBCUs), the percentage of black faculty teaching at predominantly white institutions is only about 3 percent.

The 1988 conference report from the American Council on Education, *Educating One-Third of a Nation,* brought early attention to the dire consequences of not expanding higher educational

[1] This paper is an adaptation of a paper presented at the 1998 Department of Education conference on "Lessons from the Field on Diversity: Ensuring Access, Retention and Success at the Graduate Level."

opportunities to all Americans. In 1998, 10 years later, the Association of American Colleges and Universities (AAC&U), in a special report titled *Faculty Recruitment in Higher Education*, acknowledged that general progress was made in minority student recruitment, but not in minority faculty recruitment. According to the AAC&U, only "9.2 percent of full professors are people of color"–and this includes those faculty at predominantly black and Hispanic-serving institutions.

A 1998 AAC&U report summarized the literature on faculty diversity, citing the following reasons why faculty diversity is important:

- Because higher education now involves most of America, its faculty and leadership ought to reflect the ethnic diversity of the American people.

- A diverse faculty will improve educational outcomes for all students.

- To serve the current and future student populations, multiple and diverse perspectives are needed for a wider range of scholarly perspectives.

- It is important that colleges and universities change what and how they teach to serve new students better and to prepare all students for an increasingly diverse world.

CREATION OF THE COMPACT

The two factors that minority graduate students report most often as the greatest barriers to earning a doctoral degree are (1) lack of finances, and (2) alienation and isolation within the departments.

In 1994, an alliance was formed among the Southern Regional Education Board (SREB), the New England Board of Higher Education (NEBHE), and the Western Interstate Commission for Higher Education (WICHE) to address these challenges. These three regions represent 37 of the 50 states. This three-region alliance is significant: It is the first

time in the almost 50-year history of each organization that a single issue was important enough to address collectively. The benefits of such an alliance are potentially overwhelming for students, states and institutions.

In 1994, a five-year $5.5 million start-up phase was underwritten by The Pew Charitable Trusts, the Ford Foundation and an anonymous group. During the start-up phase, several important lessons were learned and impressive results, achieved. Compact organizers now seek additional funds so that they, along with participating states, campuses, and doctoral departments, can continue working on new infrastructures that will bring about real reform.

The Compact's design is such that as foundation incentive funding decreases, a sufficient number of states, departments and campuses will have had concrete and intensive experience with the program. This experience will provide structural changes and financial mechanisms of a sufficient magnitude–state, institutional and departmental funding—to make the program self-sustaining. It will enable additional minorities to be brought into the Compact on an annual basis—five-year fiscal packages for beginning doctoral candidates and one-year packages for dissertation-only candidates. Beyond 2000, the three regional boards will continue their work to keep the new funding infrastructures sound and to provide comprehensive program services to new and continuing departments, scholars and states.

The Institute on Teaching and Mentoring

The second barrier that students mentioned is the alienation and isolation they felt from minority scholars in their departments. Often, the minority scholar is the only person of color or one of only a few persons of color in the department. Too often, the result is a lack of participation, academically and socially, in departmental activities. To combat this problem, to help develop a supportive community, and ultimately to help increase retention rates in graduate school, the Compact achieved its, most important accomplishment: It established the annual Institute on Teaching and Mentoring. The

institute provides opportunities for scholars and their faculty (who are also invited to attend) from all three regions to (1) share insights and tips for success in graduate school and (2) to enhance research, teaching, mentoring, job search skills, networking and community-building. The synergy and opportunity created by bringing 400 minority Ph.D. scholars and faculty together are enormous. Annual evaluations of the institute reflect the powerful effect of gathering large numbers of minority doctoral scholars and their faculty.

LESSONS LEARNED TO DATE

One of the first and perhaps most important lessons learned is the need to enhance the pipeline by linking with other programs that have the same or similar goals. Already, the Compact has been working with the Preparing Future Faculty (PFF) program to address the issues of preparing faculty to teach a diverse student body and recruiting future faculty that look like America. Also, the Compact's annual institute involves scholars and faculty from programs that do not have national meetings. Programs that have joined this partnership include the Ronald E. McNair Program, the Sloan Minority Fellowship Program, and the National Science Foundation's Minority Graduate Education Program. The Compact is continuing its efforts to identify other partners that will enhance opportunities for everyone involved.

To reach the established Compact goal, teaching and student mentoring skills must become as valued as research skills. Campuses must become far more inclusive and truly prepared for the demographic shifts and demands that higher education will face in the 21st century. Several lessons have been learned regarding this issue and are operational, as cited below.

Departmental Good Practices

The Compact is requiring and promoting good practices to create a supportive enviroment within the participating doctoral departments (all being predominantly

white). For example, the Compact encourages guaranteed faculty, mentoring for each scholar (with mentoring-skills workshops organized by the Compact) to enhance scholar retention through the receipt of the doctoral degree. Frequent orientations, led by advanced graduate students and faculty, help demystify departmental requirements and graduate studies, clarify expectations, and benefit both minority and majority students. Additionally, the Compact encourages social and professional seminars that bring faculty and all graduate students together in new ways.

When first developed, Compact organizers learned that most departments were bewildered about how to build an environment of support. The ways and means of describing and implementing this most important consideration have been incorporated in the Compact's annual *Institute on Teaching and Mentoring.*

No other program involving minority graduate students is as departmentally based and focused on good practices as the compact. It is not a fellowship program that gives a student a "check and a handshake"—but requires no new behavior from the department or campus. Minority students are forced to sink or swim.

> "We need the Compact as a catalyst and sometimes as a monitor to keep us on track as we build a more supportive environment within our department," according to one *department chair.*
>
> "Your focus on an environment of support is helping us to ensure that underrepresented students feel they belong and are valued in our departments," says a *faculty member.*
>
> "Thanks to your sessions, I am becoming more comfortable and attentive in my mentoring," adds another *faculty member.*

Improved Teaching

Recognizing that teaching is undervalued on many campuses, the Compact requires its participating departments to organize general teaching skills sessions for all its graduate students and to provide careful supervision when the Compact's doctoral scholars begin to interact (in their later years of study) with undergraduates as teaching or lab assistants. The Compact is learning the best ways to monitor and offer technical assistance with these tasks. At the Compact's national institute (cited above), held every fall for scholars and their mentors, participants may attend various teaching and mentoring workshops. Below are comments from institute participants:

> "Because of the institute, I don't feel alone. It is empowering to know there are others in similar situations." (*first-year scholar*)
>
> "I obtained a great deal of insight about the expectations of a professor in different types of colleges and universities." (*second-year scholar*)
>
> "I now feel more confident in my role as a mentorto a minority student. This meeting has also given both my student and me a way to discuss our feelings and concerns." (*faculty member*)

Priming the Pump

The three regional boards are learning how to maximize the administrative and fiscal flexibility they possess as interstate organizations. With modest foundation incentive grants in hand, the Compact (for the first time in its organizational history) is raising substantial fiscal matches from state legislatures, state higher education boards, campus president offices, graduate deans, doctoral departments and individual faculty research projects. The Compact is learning that this variety and range of financial sources must be tapped continuously, if guaranteed financial packages are to be offered to each minority

scholar invited into the Compact. Very few federal agencies, national fellowship program, or interstate initiatives line up a full five years of guaranteed support.

Contrary to the above, several current and past programs have caused enormous anxiety because they have forced students in mid-stream to secure their own additional funding to complete their doctoral degree requirements. Increased student attrition has been one common result. For doctoral candidates, the Compact has learned that it must *first* insist sternly on five full years of financial coverage with states and collegiate institutions, making creative deals *secondary* to accomplishing supporting objectives. (In such deals, the various "player contributions" can vary, notwithstanding the full financial support for each scholar.)

Foundation support is needed to leverage significant matching funds from states and institutions. Each dollar of foundation funds received over the six-year period of the project will generate at least $5.60 of matching funds. Additional incentive funding from foundations will enable Compact administrators to involve a necessarily large critical mass of states, campuses and departments. This critical mass will produce the long-term support and commitment that are essential for program sustainability beyond the year 2000.

Steady Stream of Minorities into the Professorate

The number of minority scholars served to date by the Compact is impressive. Since its modest beginnings in 1994, the Compact has served 375 scholars (285 doctoral scholars and 90 dissertation-only scholars) in 93 institutions in 33 states. Over 80 scholars have completed the Ph.D., and fewer than 35 have withdrawn from doctoral studies. For the Southern Regional Education Board (SREB) region alone, the numbers are 224 scholars served (174 doctoral and 50 dissertation-only) in 55 institutions in 14 SREB states and six states outside the region. The Compact has achieved a remarkable retention rate of well over 90 percent in its six years of operation. This rate is significant considering only

50 percent of all doctoral students in the United States complete the degree and only 37 percent of U.S. minorities complete the doctoral degree.

The Compact is not intended to be simply a fellowship program. More important than the number of scholars in any given year is the building of long-term infrastructures. These infrastructures are not only reforming academic environments so that minorities can thrive, they are also contributing to the program's viability for at least a decade beyond the year 2000. Transformed faculty attitudes, improved mentoring, more attention to teaching competencies, new department practices, and unprecedented financial commitments and involvement from states and campuses are changes toward which the Compact is working.

Job Placement Assistance

The three regional boards cannot alone help scholars find suitable junior faculty positions after they complete their degree requirements. Faculty mentors and the doctoral departments must also make concerted efforts in this regard. A recent report to the Ford and Spencer Foundations confirms the Compact's suspicions: Minority doctorates, lacking coaching and assistance, often become bewildered by the job-search process. The "good old boy network" is alive and well. As the Compact learns what works with job placement, it will share insights and pointers with the larger higher education community. Undoubtedly, new customs and procedures must be developed.

The best strategy was to establish long-term state and university support. To accomplish this goal, an effort was made to get all the central players to address these problems and commit to these students. Due to the diminished federal role, states must now become more active in this process. The goal for the Compact was very simple: to increase the number of minority students who earn their Ph.D. and then who become college and university faculty. We have instituted six strategies to address this issue.

Six Strategies for Achieving Diversity in the Professoriate

In summary, these strategies include:

- Establishing long-term state and university support. As mentioned above, Compact makes an effort to involve all participants in graduate education. We are now emphasizing to the states in our respective regions that they must assume more responsibility in minority graduate education. Of course, universities still share this responsibility. The Compact has memorandums of agreement to help form partnerships to get students through graduate school. These memorandums involve the states, institutions, the departments, the students and the regional education board. Everybody has a vested interest in getting these students through graduate school.

- Removing financial barriers for minority students. We put together a five-year package of support, and I emphasize the word "package." We obtained funding commitments from the states, foundations and institutions. Many groups invested in this effort, with the students ending up with a five-year package of support.

- Building a supportive work environment. The culture is a key element in defining what graduate school is all about. What are good departmental practices? What should the department be doing to make this environment a better place not only for minority students, but for *all* graduate students. As many of us know, graduate departments are not necessarily the most friendly places. In fact, many students view them as very hostile places. But the Compact is trying to have some impact and input into what these departments are doing and to have these departments engage in good practices.

- Promoting effective teaching, mentoring, and research. We are creating an institute, an annual national meeting that addresses community building, teaching excellence and mentoring—the things that research tells us are keys to getting more minority

students into these programs and changing fundamentally what goes on at the department level.

- Building coalitions among advancement programs. Again, dealing with this strategy at the doctoral level alone will not be sufficient. Because as Dr. Longanecker has said, we've got to increase the yield, if you will. We've got to get a better return for the numbers of students who are enrolling in undergraduate institutions who go on to graduate, and then go on to graduate school, and complete a graduate degree. We've got to do better.

  One thing we are doing as a program is trying to connect with minority advancement programs. Some groups that we are trying to connect with include TRIO (the McNair program), NSF (the AMP program), and from NIH (the MARC program). All of these programs help prepare students for advanced degree pursuit, and we are trying to be there for the next step.

- Communicating the importance of faculty diversity. We heard both speakers last night talk about the importance of faculty diversity to all of us.

Additionally, the five-year scholars awards program is similar to other five-year programs across the country, where students go to school full-time, year-round.

CONCLUSIONS AND NEXT STEPS

Ethnic minorities constitute only 13 percent of the nation's full-time faculty at colleges and universities. Diversity among faculty is needed to help ensure a quality, broad education for all students. Faculty diversity can help prevent minority students from feeling out of place in college. It can also improve the pool of qualified faculty members who can serve as mentors to all students. Faculty diversity will help minorities become successful, integral members of society and be seen and accepted in positions of leadership.

By raising additional funds, each regional program will be able to take advantage of longstanding relationships with member states and institutions for additional scholars and support. With added support, the Compact will increase the number of scholars available for college and university teaching jobs and enhance the Compact's overall viability.

The strategy of building a program containing multiple components is working. The Compact for Faculty Diversity has proven its effectiveness with a retention rate of 95 percent and an estimated 20 to 25 graduates per year. The program is clearly among the most successful programs of its kind. With ongoing and increased support from states, institutions and outside interests, the Compact will continue this remarkable success.

Some important next steps include the following:

- Federal and philanthropic organizations should take better advantage of regional organizations to deliver services and support to minority doctoral students.

- States and institutions should be willing to make long-term financial and policy commitments.

- States and institutions should commit to hiring more minority faculty members, including graduates of the Doctoral Scholars Program.

- States and institutions should use the Doctoral Scholars Program as a model for local initiatives to recruit, retain and award Ph.D.s to minorities.

- States and institutions should encourage minority students to pursue advanced academic degrees.

The Compact's three regional offices are coordinating these long-overdue needs in American higher education.

THE COMPACT FOR FACULTY DIVERSITY: THE WESTERN STATES MODEL

Ken Pepion
Project Director, Western Interstate Commission for Higher Education

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The Compact for Faculty Diversity's annual Institute on Teaching and Mentoring has emerged as a central activity in our overall program. Although each region of the Compact works a little differently in terms of providing financial and academic support to scholars, the institute brings scholars and faculty together from the three regions for three days of intensive sessions ranging from surviving and thriving in graduate school to negotiating the first faculty position. The institute provides the opportunity to focus on issues related to quality teaching and mentoring, promoting institutional change, preparing for faculty life, and probably most important of all, building a national network of minority scholars who form a broad-based community of support.

Although many institutions are paying more attention to preparing graduate students for classroom instruction, and many have developed programs to improve their teaching skills, very rarely do institutions provide students with information that would prepare them for academic careers that involve a wide range of roles and responsibilities of faculty. The purpose of our national institute is to fill the gap: to provide information to scholars that will prepare them better for faculty life in a setting that is both supportive and inspirational. The institute also motivates students to continue their graduate studies by building a community of support that extends beyond the boundaries of a single campus.

The goals of the institute are to increase the likelihood that students will complete the Ph.D. and to prepare scholars for academic careers. Several examples of workshops and discussion sessions are listed below.

Graduate school, particularly at the doctoral level, places new demands on one's family and personal life. Not having as much time to spend with one's mate or children, spending less time with extended families, and having less contact with siblings and friends can take their toll on relationships. Many of our scholars are the first in their families to enroll in graduate school, and family members often fail to realize all that is involved in earning a graduate degree. Particularly if students are from cultures and communities that place a high value on family relationships and have expectations and responsibilities for their families, the role conflict for the student can be powerful.

In a session titled "Balancing Personal Life with the Demands of Graduate School," there generally are more advanced scholars, representing the various communities targeted by the Compact, who share their experiences, coping strategies and support resources. Current scholars share tips on how they are able to overcome the isolation they experience as possibly the first or the only person of color in their graduate program, and how they balance the many new demands placed on them.

For several years, we've sponsored a seminar on "Managing Your Graduate Education as a Small Business," led by Margaret Tyler, formerly assistant dean of the Graduate School at MIT and now executive assistant to the president at Norfolk State University. Margo advises scholars to approach their graduate education as if it were a small business. The same factors that are essential to good management, including good health, hard work, enthusiasm, assertiveness, realism, self-confidence, and asking for help when needed, are all essential to success in graduate school. This session provides a wealth of information on good organizational and communication skills that students, particularly those just beginning their programs, can incorporate.

During the institute, we present several "nuts and bolts" workshops on topics such as forming a graduate committee, preparing for comprehensive exams and writing the dissertation. Fully recognizing that the process and procedures may vary widely according to the institution or discipline, we try to cover many issues that graduate departments share. The various functions served by a graduate committee, including

approving the program of study, developing the comprehensive exam, approving the dissertation proposal and responding to the oral defense are provided. The purpose of the comprehensive exam, the examinations process, and methods on how to prepare for and take written and oral exams are covered.

Our workshop on "Writing the Dissertation" has consistently received high marks in evaluation by scholars, despite the differences in style and substance among disciplines. While many of these issues seem routine to those involved in graduate education, we've learned that many of our scholars have not received this information at orientation sessions at their universities. The workshop helps to demystify the entire graduate process, especially in a setting where scholars are free to ask questions without feeling intimidated.

One of the problems with programs that provide only fellowships is that they have, in some cases, tended to isolate students from the day-to-day life of their departments, particularly if students are not required to serve as teaching or research assistants. Getting to know your graduate faculty, their research interests, and something of the norms and culture of the discipline are critical components of the professional socialization process. It is critical for scholars to develop professional and personal relationships with members of the department.

All students in the Compact are required to accept teaching assistantships and take part in activities to develop their teaching skills. Although we can't provide the type of sustained skill development offered by university teaching centers, at the institute we focus on the increasing importance of good teaching skills in securing faculty position and the emphasis placed on teaching at various institutional types. We also discuss issues related to resolving conflict in classroom teaching, meeting the needs of diverse learners and using technology in the classroom.

The most critical relationship for scholars is with their faculty mentor. Our workshops on mentoring provide advice to students on introducing themselves to potential mentors

when beginning their graduate programs; understanding the various mentoring roles, the stages of mentoring and the need for multiple mentors; and dealing with negative experiences with the mentor. Additionally, students are given pointers on their own development as mentors, both as peer mentors to other graduate students and as future faculty.

One of the unique aspects of the institute is the involvement of faculty mentors. We frankly did not know how this would work when we planned the first institute, but over the years we have learned that their involvement is an important part of helping develop their effectiveness as well as strengthening the relationship between them and their students. Faculty attend sessions on building a supportive environment, where they learn effective practices and strategies for retaining graduate students of color. Orientation sessions, the monitoring of student progress, professional development activities, and a curriculum that includes the contributions of underrepresented groups can all aid in developing an atmosphere that is accepting of scholars of color. Concrete strategies for building environments of support in their departments have helped some of our faculty overcome the "sink or swim" attitude that prevails in some graduate departments.

For many of the faculty, this is their first experience in mentoring a doctoral student of color. The institute provides them the opportunity to talk with other faculty mentors about their experiences and to become sensitized to the needs of minority scholars. Experiential exercises that involve both the faculty member and their student allow them to candidly discuss their relationship in a non-threatening environment. Based on evaluations of the institute by faculty mentors and the follow-up we do on their activities in the departments, we've concluded that their involvement in the institute has been a valuable element in our overall strategy to improve mentoring relationships for Compact scholars.

The second goal of the institute is to prepare scholars for future careers in the academy. Throughout the institute, scholars have the chance to network with successful faculty role models who are from similar communities and share some of the same issues and

problems encountered by Compact scholars. Role models discuss their transition from graduate school to their first professional positions, and their subsequent challenges and joys in the field of higher education.

We also discuss the current job market for faculty in various disciplines and the changing expectations of faculty. Graduate colleges and departments rarely provide information to graduate students on topics such as the use of part-time faculty, alternatives to the tenure system, the use of technology in instruction, calls for accountability and efficiency by the public, and the impact these issues will have on the faculty of the new millennium. Clearly, future faculty will operate in a much different environment from that experienced by current faculty mentors and teachers. Sessions on academic careers in the new century will help prepare scholars for changing demands.

One of the sessions that was interesting and well-received last year—to scholars as well as faculty mentors—was intellectual property rights and professional ethics. Led by one of our faculty mentors who is currently president of the American Association of University Professors (AAUP), this session described the role of technology in increasing the potential of scholarly and creative work as a source of income for institutions and individual faculty, and the ethics involved in the control and ownership of educational products. The purpose of this session is to prepare minority scholars for the debates regarding intellectual property rights and for the challenges facing future faculty on issues concerning intellectual property.

Job preparation workshops include developing a professional curriculum vita, proposal writing and job interview techniques. We also sponsor a workshop that provides information on the breadth of opportunities available at different institutional types, stressing that more job opportunities may exist at institutions different from the type that conferred their doctoral degree and how a particular mission may affect the institution's expectations of faculty work.

Workshops on issues concerning junior faculty are provided to scholars nearing completion of their degrees. Negotiating for more lab space, better computer equipment and less teaching load to develop a research agenda are topics covered in this session. The premise underlying this session is that junior faculty can negotiate certain terms of their appointments that will prove beneficial to the tenure process.

The tenure process itself is also the subject of a workshop, which describes the relative weighting of teaching, scholarship and service in promotion and tenure. The class also describes the departmental and institutional committees involved in the process. We've found this is the first exposure that most of our scholars have to this mysterious process, and tips are given on preparing for advancement into the tenured ranks.

By inviting junior faculty who were previously Compact scholars to share their experiences during their first and second years, we communicate the possibility of success to current scholars. Past scholars discuss their transition from graduate school to their first faculty appointment and offer tips for successful transition. Past scholars also form a growing network of professional support to current Compact scholars and serve as advocates in recruiting scholars for faculty positions.

Evaluations and follow-up with Compact scholars on the outcomes of their experiences in the institute have produced some encouraging results. Students report an increase in their general satisfaction with their graduate work after learning more about the tenure process. Students also said they became more aware of time management and other survival skills in graduate school, the faculty job market, and the various roles faculty play. Both faculty and scholars report that their understanding of mentoring has increased and their mentoring relationship has been strengthened. Faculty came away with a knowledge of principles of good practice in graduate education, and many report successfully implementing them in their home departments.

Possibly our most important outcome is the identification Compact scholars feel with a national program and an expanded network of support. Through the institute, they form

friendships that last into their professional careers. Also, each institute they attend reinforces their resolve to complete graduate school and begin their careers in higher education. While many of the workshops and seminars can be and are being held at the institutional level, it is this affiliation with a large group of minority scholars all of whom share similar challenges and aspirations—that provides inspiration and motivation that is hard to duplicate by any single institution.

DOCTORAL EDUCATION: THE HISPANIC/LATINO IMPERATIVE

Raymund Paredes
Associate Vice Chancellor of Academic Development
University of California–Los Angeles

I am pleased to have been asked to speak about Latino participation in U.S. doctoral education. I find that often when coming from California, as I do, to the East Coast, I have to provide a little bit of history and a little bit of context for consideration of the issue of diversity, and that is the way I would like to begin.

First of all, I think it's important to note that within the next five years Latinos will become the largest ethnic group in the American educational system and will, of course, play an increasingly prominent role overall in American life. You can see some very dramatic trends in some of the states where the Latino population is concentrated. For example, in California within five years, Latinos will represent about 50 percent of the school-age population in the entire state. This trend is becoming more and more typical in states such as Texas and some others.

If you look at the educational indicators for Latinos, particularly for Mexican Americans, Puerto Ricans, Dominicans and Central Americans, you note very quickly that the indicators are not at all encouraging. We know, for example, that Latinos have the lowest educational attainment of all of the major ethnic groups in the United States and we also know that they have the highest dropout rates among the major ethnic minorities. On this subject, I urge you to read *Our Nation at the Fault Line—Hispanic American Education.* It presents a very good summary of the status of Hispanic education in this country and presents data that I believe has some profound implications for the sociological and economic well-being of the United States.

Furthermore, the educational picture of Latinos in this country is shaped by the fact that many Latinos in this country, particularly in California, are either first or second-generation immigrants, which means that they have very little experience and very little familiarity with the American educational system and, consequently, very little understanding of how to make that system work for them.

These general circumstances have profound implications, as I said, for this country. They also have profound sociological and economic implications for the states in which the Latino population is concentrated, which happen to be the largest states in the country: California, Texas, New York, Florida and Illinois.

If we turn specifically to the participation of Latinos in doctoral education, then we see that once again the picture is not at all encouraging.

First, I should say that we don't have extraordinarily precise data on Latino participation in doctoral education because there are some data sets that include foreign Latinos and others that include only native-born groups. However, as far as we can tell, it seems that approximately 2.2 percent of all doctoral recipients in the United States in the years 1994-95 were Latino. This is an increase of one-tenth of 1 percent from the same data ten years earlier. This, I think, contrasts with the fact that the Latino population in this country is growing dramatically, and, in fact the Latino participation at the undergraduate level has also increased.

For example, we see in the same period that I just mentioned an increase in the number of bachelor's degree recipients who are Latino, from 1984-94, of 2.4 to 4.5 percent. But that same growth, as I indicated, has not occurred at the graduate and particularly doctoral education levels.

Second, the elimination of affirmative action in states like California and Texas has had an extremely significant impact on Latino educational opportunities at the higher educational level for several obvious reasons. For example, if you look at the national

data regarding the institutions where Latinos tend to receive their doctoral degrees, you will see that three out of the top four institutions are the University of California at Berkeley, UCLA (my workplace) and the University of Texas at Austin. These three institutions, of course, have been hit hard by the elimination of affirmative action in their respective states.

Eliminating affirmative action has resulted in a drop in the number of applications and admissions to doctoral programs among minorities at these and other similar institutions. And for these groups affected by the elimination of affirmative action, there has also been a troubling decline in the availability of financial aid. It's important to point out that Latinos, by and large, are the poorest ethnic minority group in higher education. And thus, eliminating ethnic-specific fellowships and ethnic-specific financial aid, in general, has had a particularly difficult impact on that group.

For example, I can tell you that at UCLA, before the advent of the Regent's resolution to eliminate affirmative action and Proposition 209, we had some very successful four-year fellowship packages that targeted minorities specifically. Because we can no longer do that, we have been tracking what has happened to that fellowship money. That fellowship money, which was between $6 million and $7 million a year, was simply put into the overall pool of financial aid for UCLA graduate students. We have been tracking that money in the three years since affirmative action has been eliminated, and we have found that somewhere between 70 and 80 percent of that money is now going to students who are not from underrepresented groups. Efforts to improve Latino participation in doctoral education must, of course, begin at the undergraduate level, and I would like to talk about that now.

First, we know that Latinos often come from immigrant families; consequently, they have very little information about graduate school. They have very little information about what it takes to get into graduate school. They have very little information about such conventional issues as getting letters of recommendation, getting the kind of experience that prepares them for graduate education and so forth. However, if you look at the

surveys of Latino students at research universities around the country, you see very quickly that they tend to have the same degree of interest in graduate education as the general undergraduate population.

In other words, if you take a poll at UCLA at the freshman level and you find that approximately 75 percent of the white students are interested in going to graduate school, you'll also find that approximately the same percentage of Latino students have the same aspiration.

We also need to take a look at several critical issues, one of which is financial aid—an area where we must do better. For example, as I said a moment ago, Latinos as a group tend to be the poorest ethnic students in higher education. They tend to incur heavy debt loads at the undergraduate level, acquiring $40,000 to $50,000 in debt. It is not likely or it is less likely that they are going to go on to graduate school and incur even higher levels of debt.

The other thing that happens, of course, is that if they do go to graduate school, they are more likely to go into those fields where their chances of making a higher income are greater. And that of course drives them away from academic fields.

Another thing that we need to do at the undergraduate level—this is a particularly critical issue—is switching the focus across the board in minority education. Besides focusing on simple graduation rates, we must focus on the *quality* of education and the quality of the academic experience that Latinos and other minority students are getting.

Previously, I have said: "The problem with a lot of academics and port programs for minorities at the undergraduate level is that they tend to regard the undergraduate experience as a kind of a mine field." Moreover, the idea associated with a lot of academic support programs for minorities have been to get the students through the minefield without getting blown up. Thus, a lot of minority support programs have told students to avoid such majors as physics, chemistry, math, etc., and take something easier

so that they can make their way through the mine field. Or the programs might encourage them to stay away from a particularly difficult professor.

The consequence has been that many institutions have experienced a significant rise in the graduation rates for Latinos, but there has been little improvement in academic achievement. We need to do something about that. We need to give students information about rigorous academic programs and what is necessary for outstanding academic achievement as soon as students arrive on campus at the undergraduate level.

At UCLA, we recently developed a program with a significant impact, called the graduate mentorship program. This interesting and successful program gives students, from the first time that they arrive on campus, information about graduate education and academic achievement. We put these students in honors programs from the very beginning. We put them in mentoring relationships with professors, so they can have research experience. We put them in activities in which they work in community research programs. These experiences have proven to influence students to continue their education in graduate school.

We know that Latinos and other ethnic minorities have a particular interest in programs that have a community focus. We have placed these students in these successful, community-based research programs and have found that the students who participate in these programs are much more likely to go to graduate school than students who have not participated in these kinds of programs. We encourage these students to go to other campuses or to summer research programs between their junior and senior years, for example. We have found these programs to be successful as well. In their senior year, the students we have been working with from the moment that they entered UCLA, participate in academic workshops where they are informed of different opportunities and academic fields. We put them in contact with senior professors on the campus who, in turn, give them information about the best programs, financial aid opportunities and so forth. We provide workshops on the Graduate Record Examinations (GRE). We even help students get letters of recommendation.

We have found at large public universitieslike UCLA that for many minority students, a major obstacle to applying to graduate programs is that the students feel they don't know their professors well enough to ask for letters of recommendation. Therefore, we sometimes work with such students to solicit the letters from the faculty themselves, with positive outcomes.

Once we've gone through this process, we find that the students are much more likely to apply for graduate programs at the best institutions in the country. They are much more likely to have contacted senior professors at these leading institutions and they are much more likely, as a result of all this prior activity, to be successful at those campuses once they arrive.

Another factor to consider is the correlation between the curricula at institutions and the likelihood that Latinos and other minority students will apply. For example, we know that when certain programs (e.g., community involvement) are eliminated or changed, there is a corresponding decline in application and admissions among minorities. We know, on the other hand, that programs with a very strong focus on community service and those that provide students with an opportunity to help their community, have attracted large numbers of minority students and have had greater success in getting them through the program.

Finally, I want to make a point that was emphasized several times before: We need to do a much better job of data analysis and development of programs that are data-driven. In my position I work an awful lot with the K-12 sector. One of our activities in the K-12 sector is developing school reform programs that are data-driven. When we work in a particular elementary, middle and high school cluster in Los Angeles, for example, we look at all of the relevant statistics. We look at dropout rates. We look at the number of students who are taking AP courses. We look at where students are going to college once they graduate from high school. We then develop programs accordingly. At most of our institutions, we do not have good information about what is happening to minority

students either at the undergraduate or the graduate level. We need to develop these indices. We need to develop better data sets, and we need to develop programs that correspond to the information that we secure. Thank you very much.

THE RATINGS GAME

James Voytuk
Program Officer, National Research Council

When I received the letter from President Swygert and from Assistant Secretary Longanecker to speak about diversity indexing in doctoral education, my initial reaction was, *what is it?* I wasn't quite sure what the terminology meant, but then after giving it some thought, I realized that ratings are really my favorite subject, especially the National Research Council studies that rate research doctoral programs.

During the early studies, the ratings of research doctoral programs focused primarily on the reputation of individual programs within an institution. The earliest one dates back to the 1920s when then president of Miami University of Ohio, Raymond Hughes, thought that locating the best graduate programs would help him find where and who the best persons were to hire as faculty. However, since that first study, the methodology has been improved, expanded, and modified. At this point, individuals and groups in many settings rely on the study as a tool or an instrument in their analyses.

In particular, I think that the institutions that have been involved in these periodic studies have found the information extremely helpful in setting priorities and shaping their missions. In the wake of recent court decisions affecting campus efforts to increase minority participation, many individuals realize that the number of minority students receiving Ph.D. degrees has not increased substantially. Moreover, these institutions recognize that the small increases suggest a greater need to understand graduate programs from admission to matriculation to graduation and on to careers and that such understanding might be helpful in an evaluation of what is being used for the research doctorate studies.

To set the stage for where things are right now, we must recognize, first of all, that there is a leak in the pipeline for minorities from the bachelor's degree to the Ph.D. degree. In fact, only one out of 43 minority recipients of bachelor's degrees awarded in 1987

received a Ph.D. in 1991. In 1996, the success rate dropped to one out of 51, and that was based on the baccalaureate class of 1992. The comparable rate for non-minorities was one out of 32 or 33 during that same time period. So there is a real difference here.

Now, the analyses of the number of degrees awarded according to race and ethnicity in science and engineering, as well as in all disciplines, are most revealing, especially if one considers only research doctorates and only doctorates awarded to native-born citizens. It is particularly important to remove naturalized persons from these analyses because I think that sways the information slightly.

In these data, one should notice that for African Americans in particular, there has been a rather modest increase in the number of Ph.D.s awarded through 1995. Today, African Americans receive fewer than 3 percent of the total number of Ph.D.s awarded in the science and engineering fields. In a similar vein, for Ph.D.s awarded in all disciplines, the percentage stands at 4.5 percent, which is only one-tenth of a percentage point higher than it was in 1980. So there really has not been a substantial gain with respect to relative percentage, although there have been gains in terms of numbers. While the number of Ph.D.s awarded to African Americans annually has increased by roughly 17 percent, in relation to the total number of Ph.D.s awarded, the increase has not been that great.

The data obviously indicate the need for changes in the composition of graduate enrollment and degree production. I am not going to address how these changes would benefit society or how these changes might occur. I will simply describe the data or how the data might be used in characterizing and measuring minority participation. I am sure that as presidents, provosts and deans at research universities, you are aware of the types of information that we have collected in these studies and how that information has been used.

In 1992 and 1993, the National Research Council study expanded the idea from just looking at reputation to also looking at some objective measures, which involved the

number of graduates, the productivity rates and other indicators that came from national databases. While the opinions of faculties and the reputational ratings still attract the most attention and are the most publicized, the additional information provided by these objective measures is very useful and has provided meaningful analysis.

I'm not going to go through the details describing how this study was conducted. I just want to say that we basically gathered information from the participating institutions on a program-by-program basis. This information, which was fairly limited, consisted of the faculty names and some information about the number of graduates and graduate students in that program.

We did not collect information on minority participation, such as the number of minority graduate students, the number of minority graduates or the number of graduate faculty members that come from minority groups. I think this information would have been very useful and is something that needs to be considered for future studies.

These data—particularly the faculty lists—were matched against national databases that contained information on publications and research activity to obtain some productivity measures. Additionally, some analyses were completed in which data were collected and identified from national databases pertaining to the nature of the programs as related to student graduation.

From that information, there were roughly 30 or more indices that were developed and presented for each program in each field. There were 41 fields in this particular study.

Now, let me focus for a moment on how something like this might be used for a minority index or to measure minority participation in a program at institutional, regional and national levels. I will also try to describe some of the problems that we encountered and problems that might be encountered in trying to achieve this type of data collection and analysis.

First, I think the overarching problem is that of taxonomy. This was a problem with which we struggled during the last study. If one were to look at minority participation on a program-by-program basis within a field, then one would have to address the issue of how these programs are defined. Some fields like those in the physical sciences and in the arts and humanities are well-defined, with very little variation across institutions. But in the biological sciences and in interdisciplinary fields, there are many variations, which must be considered.

At this time, I will discuss some of the measures that might be examined. First, there is the subjective measure of looking at what the environment within the institution might be. This more or less corresponds to the quality measures or effectiveness measures that were used in the research doctoral study. Again, this is a very hard thing to do. I think people question the validity of these results, but in terms of trying to find out how receptive a program is to minorities, it would be very useful. Again, *how* one might do this may need some attention, but one could look at doing some surveys of former graduate students who come from minority groups or minority faculty members, both of whom have information about programs.

I will now discuss the other measures that may be characterized as objective. These measures come from national databases that we used in the research doctorate study. One of the variables related to minority graduates from the 41 disciplines that were students in these studies. The data include the number of minority graduates in each of those fields as recovered from national databases during the period 1986-92, the time frame for our most recent individual study.

As one can see in these data, there are some fields that have good minority representation (e.g., Spanish and Portuguese language and literature). But then there are other programs, such as German, in which there are zero minority graduates, and there are many programs with fairly low percentages. For example, in computer science and the geo-sciences, percentages are very low—2 percent. And, in general, the only ones that seem to be at all

reasonable, if you even think of half of the group's representation within the general population, happen to be in the social sciences and maybe the arts and humanities.

Another interesting data set is the number of programs within the 41 fields that produced more than two minorities over the six-year period that I mentioned. The data show a large number of zeros in the humanities. Moreover, no program in the United States produced three or more Ph.D.s in the humanities. And if you think about having an environment that is receptive to minority students, that is not a good indicator.

There are other fields where the numbers are also very low; for example, the biological sciences are not that great. There are some fields (e.g., genetics and neuroscience) that are extremely low, and many of the engineering fields are low. And if you think about it, only 20 percent of the Ph.D. programs studied awarded more than three Ph.D.s to minorities during the period under study.

One data set shows the distribution of minorities in terms of their numbers by quartiles. In other words, if you were to take each Ph.D. program within each field and block off the four quarters in which programs fell and then count the number of minorities across each one of the fields within the broad field, you would note that the top-rated programs aren't too bad. Although minorities are below the second quartile in the arts and humanities, in the top-rated programs such as the biological sciences, engineering, mathematics and particularly in the social and behavioral sciences, more minorities are receiving Ph.Ds. But, note that most of the minority Ph.D.s are produced in those top-rated programs; you end up with percentages of minorities coming from those top-rated programs being the lowest in such fields as the biological sciences, engineering, and mathematics. And, again, this speaks to the quality of the programs.

Let me now look at some measures that we did not collect in our study, but might be useful and may have already been mentioned. Regarding admissions, we need to look at data related to finding out exactly the percentage of minorities that apply to a program, those that are accepted, and those that actually enroll. Also, we will look at GRE scores

to get some measure of the quality of the students that are applying to those programs. Now, I believe that this is all information that could be collected at the institutional level. None of this is available at the national level.

A second measure is attrition—finding out how many students or what percent of the students actually get through the program. And this is, again, a measure which I believe is of interest not only for minority students, but across the board in higher education and one in which data is extremely difficult to collect, because I believe that in many institutions you may lose track of those students that don't get through. They sort of fade away and you never know when they left or why they left. Data of these types would be very useful in the ratings and indexing of programs for graduate schools in general and for minorities in particular.

The third measure that I think would be interesting in this regard is what happens to students five or ten years after graduation. In other words, institutions might survey the minority students to find out where they are, and I think and hope that maybe some of the results for graduate students would correspond to those of Bowen and Bok that show African American graduates as successful and highly productive individuals within society.

I will conclude by saying that I think some of these measures—indeed all of these measures--would be extremely interesting and very valuable to collect. A reasonable method would be to have each individual institution collect that data and then post it either on the Internet on their own web pages or maybe somewhere on a web site that would be universally acceptable.

Again, I've only presented ideas on what measures might be useful, which I hope may be of help in our discussions later today. Thank you.

SUMMARY

William E. Kirwan
President, Ohio State University

We began this conference with two overview commentaries, one by Pat Swygert, Howard University president, and the other by David Longanecker, assistant secretary for postsecondary education. President Swygert set up the philosophical context and drew upon some of the points that Bill Gray made during his keynote address. He raised two issues that I think are particularly appropriate for further analysis. One is that although there has been some progress in achieving diversity in doctoral education, there have been many concerted efforts to attack special programs. There is concern about how our institutions are responding to these attacks. Some seem to be moving ahead, in a certain sense, with blinders on and just doing what they have been doing and not thinking about what the future might hold. On the other hand, others seem to be pulling back and doing very little, an issue that we need to think through.

President Swygert also made a very good point in stating that we need to explore ways of not just measuring numbers, but also measuring the quality of effort among institutions. The numbers can be misleading because different geographical areas of the country have different opportunities to produce numbers. A way to assess the quality of effort that we are making in higher education is needed to address this problem.

David Longanecker provided us with additional data. One of the most significant pieces of data was an analysis of the distribution of minorities in highereducation, the distribution of groups in higher education by racial category, the distribution of groups in elementary and secondary education, and the dramatic changes that will occur over the next several decades. We should focus our attention on this data.

The presentations by Ansley Abraham and Ken Pepion provided us with a discussion of a Compact that has been created between the Southern Regional Education Board, the

Western Interstate Commission on Higher Education and the New England Commission on Higher Education. This Compact involves working cooperatively to create a model program for the recruitment and graduation of minorities in doctoral programs. Dr. Abraham and Dr. Pepion presented some very impressive data about the success of this effort. One statistic that caught my attention was that this program has had an 80 percent retention rate. The program includes efforts to benchmark the best practices of participating universities and departments, as well as a national conference that brings together faculty and students who are participating in this seemingly very effective networking effort.

Raymund Paredes from UCLA presented some rather alarming data largely focused on Latinos and the enormous disparity between their participation in undergraduate and graduate education. One of the most telling pieces of information was the impact of Proposition 209 in California on diversity in graduate education. Using his own institution as an example, he observed that prior to Proposition 209, $6 million to $7 million was being spent on financial aid at the graduate level for minority students. Now that money can no longer be spent in that manner, so about 80 percent of those funds have started supporting non-minority students. Basically there isa drying up of the very significant financial aid that existed before.

Finally, Jim Voytuk of the National Academy of Sciences discussed indexing or benchmarking as measurements of doctoral programs in the United States, and the need to continue expanding various measurements, especially success rates, in recruiting and graduating minority students who are in major doctoral programs.

One issue for Secretary Riley and the Department of Education to address is where the nation is headed with respect to affirmative action, particularly in view of some of the alarming statistics provided by Dr. Paredes. It is clear that we must do a much better job in producing more minorities with Ph.D.s. And it seems that if we are going to do a better job, then we must have special programs. And if we have special programs that have an element that takes race into account, in many states we are already running against court

decisions. Who knows what the future holds with the court decision that is about to come down in the case involving the University of Michigan, which will affect yet another entire circuit of the federal courts?

Doctoral-granting institutions could clearly benefit from the advice or comments from the Department of Education as we continue to think through how to deal with affirmative action in the current environment, with sensitivity to the very real problem of minority doctoral participation.

CONCLUDING REMARKS

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The issue of affirmative action is far from ultimately being settled. As far as our view in the Department of Education is concerned, we still look to the Bakke case as the law of the land. I believe the Bakke case was a very good case, because it had rather clear definitions. If I recall, its basic premise of using affirmative action if the case for past discrimination was proven became a well-accepted view among higher educational institutions. In the Bakke case, race could be used as a factor for admission if no other factors or policies could be found in implementing diversity. In other words, if using affirmative action was the only way diversity could be achieved, then it could be used. Although strict, the measure was good.

Of course, Proposition 209 in California and the Hopwood case in the 5th Circuit in Texas have gone against these decisions, but the Supreme Court has not reversed that general law. There have been other cases, of course, dealing with different aspects of the issue. For those cases that apply, Bakke is used. For those that do not, other laws may come into play.

As far as the question concerning what we should do when making decisions at the college and university level, and in other places, I think it's very important for all of us to try to use other methods as much as possible and not see using other methods as a weakening of our position on affirmative action.

For example, in Texas, I think the top 10 percent of high school graduates automatically qualify for admission into the state colleges and universities. I believe the figure in California is 4 percent or 5 percent. But those are techniques—and there are a number of others that you are familiar with—that attempt to ameliorate the situation or have a

positive result without directly using race as a factor. While they do not back off on affirmative action, they, nonetheless, use practical ways to affect the issue of diversity.

Just this morning, I discussed the issue of diversity at a cultural fair in our Department, where Hispanics, African Americans and Asian Americans dressed in cultural attire and where interesting multicultural music and performances were featured. I told them we were in what I called the Department of Education's Rose Garden (it's more of a concrete garden than it is a rose garden). I discussed the beauty of diversity, especially in this country that is so effective, so powerful and so influential—the most diverse country in the world. If we lose this value of diversity, then I think we will lose a great deal.

So I think diversity is very important, and none of us should look the other way when we are faced with a tough issue of this kind. However, I do think we should use ways other than affirmative action when we can in trying to develop diversity in a systematic, sensible way and then fall back on affirmative action to make sure diversity is maintained.

Another issue is, of course, the entrance requirements. I believe Dr. Gray also discussed this issue. I think it's so important that we have multiple ways of determining admission policies. This idea of using one test to determine admissions is really inadequate. Tests may be a part of other assessment strategies, for example, like the very creative, innovative assessment procedures being implemented in California and in other places. Testing must measure a young person's ability to get where they are from where they were—which is very, very important. A young person who has the desire, the motivation and the ability to get where they are—when neither parent went to college or perhaps high school, or neither parent could speak English—must be taken under consideration. There are many situations in which a young person has overcome many such educational complications and made great progress. In my judgment, it makes very good sense to consider these situations in our admissions policies.

SUMMARY OF RECOMMENDATIONS

The participants at the Leadership Summit generally recognized the need for diversity and accepted diversity as important from the K-12 level through higher education and in the business community. The issue of most concern was how to expand diversity in higher education institutions. The following summary characterizes the recommendations made by the participants.

1. The federal government should further promote diversity at the graduate level.

   - Plan and prepare for a White House conference on Diversity in Doctoral Education.

   - Develop a measurable yardstick for assessing efforts and progress toward increasing doctoral degree productivity among underrepresented groups.

   - Task the nation's research universities with intensifying their efforts to make increased diversity in doctoral degree production a reality, perhaps by using strategies that differ from those of the past three decades, which now are under legal and legislative scrutiny.

   - Strengthen the role of partnerships between and among universities, the federal and state governments, the private sector, and the K-12 community.

   - Assess the role of (Graduate Record Examinations) GRE scores in admitting students into various programs and in evaluating the awarding of financial aid and the participatory roles these elements play in the production of doctoral degrees.

   - Establish opportunities for dialogue between Tier I and Tier II Institutions of Higher Education.

- Convene a group of higher education and graduate leaders to determine the feasibility and desirability of producing periodic data on the progress of graduate institutions in achieving racial and ethnic inclusion. Institutions could use such data as benchmarks for comparing themselves with peer institutions regarding size, type, resources, constituencies, and so on.

- Establish ongoing mechanisms for their staff to communicate regularly with members of the graduate community on issues pertaining to access and success in graduate education for underrepresented minorities. An informal advisory committee on diversity in graduate education—consisting of graduate and Department of Education leaders—might provide this mechanism.

- Prioritize research and training grant proposals, especially proposals for Graduate Assistance in Areas of National Need, which seek to link, as appropriate, undergraduate and K-12 programs that target low-income, first-generation and minority students, especially the Ronald E. McNair Post-baccalaureate Achievement Program and other TRIO programs. Linking programs from different departments is necessary for greater inclusion in graduate education.

- Provide more financial support to minority students who are pursuing graduate degrees because the lack of funding is a reason many give for not continuing to pursue graduate degrees.

- Conduct a study to compare the level of indebtedness between minority and non-minority students, including students at the graduate and undergraduate levels.

- As appropriate, give priority to proposals in graduate training competitions that strive to build linkages between graduate programs and K-12 programs, particularly those that target low-income and underrepresented minority students.

- Support the development and maintenance of a national database consisting of the names and fields of underrepresented minorities who meet minimum and agreed upon qualifications for graduate study. The models created by the National Name Exchange and the Western Name Exchange should be considered in implementing this recommendation.

2. The role of institutions should include the following activities:

- Make mentors available and accessible for undergraduate students upon enrollment in the institution.

- Counsel minority undergraduate students to engage in challenging courses and programs that prepare them for future graduate study. They should also be encouraged to pursue the Ph.D. as opposed to being steered to jobs and the pursuit of terminal master's degrees.

- Petition legislators to suspend taxation on stipend support.

- Review internal organizational structures and budgets to determine the best and most effective allocation of staff and fiscal resources to enhance diversity in graduate education in view of changing legal requirements and public attitudes.

- Facilitate the mentoring and retention functions in graduate and doctoral education by ensuring proper development of faculties, and systematically offering services that match the requirements of culturally diverse graduate student populations.

- Recognize publicly those faculty members who undertake mentoring roles. The reward systems at institutions should reflect a valuing of mentoring.

- Create mechanisms for supporting K-12 projects that enhance the acquisition of the basic skills required for eventual undergraduate and graduate study, in recognition of the fact that the "pipeline" is an important topic and that it begins before the undergraduate years.

- Create partnerships with other institutions (e.g., elementary schools, high schools, corporations, public interest organizations, and community groups) to establish research initiatives around a particular aspect of diversity; and to identify strategies and techniques for effective recruitment, retention and career development of minorities in K-12, higher education and the workforce.

- Work with professional associations to increase their presence in promoting diversity at the graduate level.

3. Historically black colleges and universities should develop more doctoral programs. They should also seek to establish collaborative initiatives, where appropriate, with larger research institutions.

4. Faculty at doctoral-granting institutions should build more relationships with faculty at other institutions (e.g., DMOS, Baccalaureate I and II) to enhance their capacity for research and faculty development, diversity of thought and problem solving.

CHALLENGES FOR THE FUTURE

As we continue to address equity in doctoral education, there is a growing interest in focusing national attention on this issue through a White House Conference on Diversity in Doctoral Education. This idea is the result of two conferences—one in 1998 and the second in 1999—sponsored by the U.S. Department of Education. The purpose of the first conference, titled Lessons from the Field in Achieving Diversity at the Graduate Level: Ensuring Access, Retention and Degree Attainment, was to identify some of the most promising strategies that educational institutions have used to recruit and retain (through Ph.D. completion) students from underrepresented groups.

The second conference is the topic of this publication: Leadership Summit on Diversity in Doctoral Education. Sponsored by the U.S. Department of Education and Howard University, the conference was an outgrowth of the first conference and featured a larger group of academic leaders. These leaders, including several university presidents, provosts and graduate deans, discussed their roles in advancing the goals of inclusion at the doctoral level. Presentations from both events demonstrated the need for the nation's research universities to intensify their efforts to increase diversity in doctoral degree programs.

These exploratory activities have revealed a widespread consensus concerning the need to ensure access to graduate and professional education to *all* Americans. The next step may be, as mentioned above, a White House Conference on Diversity in Doctoral Education. Such a conference will place the national spotlight on diversity, as well as develop yardsticks for measuring the efforts and progress of academic institutions in increasing doctoral degree recipients among underrepresented groups.

As we get close to identifying the most efficacious strategy to establish equity, we must continue our conversations over the months ahead and focus on making measurable progress. In the past, legal measures such as affirmative action were necessary to achieve diversity in higher education. But, recent court rulings and state legislative policies

regarding affirmative action—in particular race preferences in admissions, financial aid and hiring policies—to increase minority representation in higher education, have come under attack. As we have seen, these court rulings and state policies have had an adverse impact on the numbers of minority students enrolled in and faculty members represented at institutions of higher learning.

Diversity in higher education is identified as a solution to higher education's paucity of minority Ph.Ds. The academy must diversify because it fulfills the American ideal and is necessary to the development of the American work force, especiallythe faculty of our nation's colleges and universities. Diversifying also creates an academic environment that benefits all students and faculty members. Promoting diversity in higher education will encourage interaction among people with differing points of view, which is imperative to learning. Enrolling representative numbers of minority students indicates the strength of the higher education institution's commitment to diversity.

One important challenge of higher education institutions is to prepare students effectively for the work force of the 21st century. The Bureau of Labor Statistics projects that the labor force will increase by 15 million over the 1996–2006 period, reaching 149 million in 2006. The nation's minority groups will become a larger part of this labor force. The challenge for the country is to prepare a robust pool of minority students, especially at the doctoral level, who are well-qualified to succeed in the working environment of the new millennium.

Equally important is whether students from all races and backgrounds can work effectively in a more diverse workplace. This is important because the success of the country in a highly competitive global economy depends on whether it has the most qualified people in the labor force, as well as whether it has people who are comfortable working with all types of individuals. Institutions of higher education can play a major role in preparing their students to live and work in a more diverse American society.